CASES

ILLUSTRATIVE OF

THE PATHOLOGY OF DYSENTERY,

WITH REMARKS

BY

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OFFICIATING PROFESSOR OF CLINICAL MEDICINE, AND SECOND PHYSICIAN TO THE MEDICAL COLLEGE HOSPITAL, CALCUTTA.

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CASES.

I beg to submit the following cases illustrative of the Pathology of Dysentery, a disease the fearful every-day importance of which to the medical practitioner in India is the only justification for my intruding on the Profession after the elaborate works of Annesley, Morehead, and others.

Case I.

Dysentery, irritative, from the presence of Tape-worm in the intestine.

Girdhari, a Hindu cooley, 15 years of age, was admitted into the Medical College Hospital on the 18th September 1864, with a dysentery of 12 days' duration, passing daily with much straining 10 or 12 nasty bloody stools, and complaining of a severe burning sensation in his feet. He stated that he had been in the habit of eating pork. He was ordered milk diet, and the following powder every four hours:—

℞

Pulv. Ipecacuan	gr. v.
„ Acaciæ	gr. x.
Sodæ Carbonat	gr. v.

M. ft. pulv.

On 20th September he had passed many scanty liquid reddish stools.

The same treatment was continued, and besides, he was ordered to take at once a 20-grains dose of ipecacuanha.

On the 21*st* he had had 24 liquid Port-wine coloured stools, but no vomiting from the ipeeacuanha.

Continued medieine and diet.

On the 22*nd* he had passed five or six large stools, eomposed almost entirely of joints of the tape-worm.

On the 23*rd and* 24*th* no stool. Medieines discontinued from the last date, and ordered a dose of castor oil and turpentine, to be taken at onee.

From the last date to the 27th he steadily improved; the purgative having aeted only twiee and bringing away no more tape-worm, and the bowels having been regular afterwards, he was discharged on that day.

Here the expulsion of the tape-worm was elearly attended with eomplete arrest of the dysenteric aetion, which, there ean be no doubt, was due to irritation conveyed down the alimentary eanal.

Case II.

Dysentery, congestive.

Takoor Dass, a Hindu Durwan, 32 years of age, was admitted into the Hospital on the 1st May 1864, in an extremely low state with a diarrhœa of 20 days' standing. He was prescribed chalk with opium, and rum and ammonia, and light nourishing diet. He continued in this state, getting one or two motions a day, and his extremities becoming gradually paralysed, until the 23rd, when it was noted that he had had three or four stools, but that his muscular power was improving. From this time forward the looseness of bowels and prostration steadily increased, in spite of all treatment, till the 15th June, on which day he expired, fairly worn out by the disease.

A *post mortem* examination was made nine hours after death, when the following notes were recorded: On opening the large intestine, its whole traet was found occupied with *patches of congestion,* but the lower part of the rectum and the cæcum were throughout *deeply congested*; no uleers; no peritonitis; liver of natural size, but somewhat fatty; spleen slightly enlarged and hardened.

Case III.

Dysentery, exudative (pellicular), with mammillation.

Ramjebun Singh, a Hindu Durwan, 40 years old, was admitted into the Hospital on the 31st December 1864, with a dysentery of 15 days, passing many stools with griping and straining. On the 2nd January he was passing stools involuntarily in his bed-clothes, and on the 4th he sank from sheer exhaustion.

At the *post mortem* examination the mucous membrane of the large intestine was found generally *mammillated*, a portion of the ascending colon inflamed and covered with a *pellicular exudation*, and similar inflamed patches and pellicular exudation were also seen in the lower end of the ilium.

Case IV.

Dysentery, exudative (granular).

Monsookh, a Mahomedan cooley, 60 years old, was admitted into the Hospital on the 9th February 1865, with a three months' dysentery, passing two or three scanty stools a day, with much griping and straining, and reduced to a state of great emaciation and debility. He died on the 15th of the same month, and at the *post mortem* examination the mucous membrane of his large intestine was found thinly covered with granular exudation without any ulcers; the liver was cirrhosed.

Case V.

Dysentery, exudative, with vesicular follicular disease and minute ulcers, congestion of the left lung and serous fluid in the left pleural cavity, with thickening of the mucous membrane of the large intestine.

Hurry Churn Dass, a Hindu lad, 12 years old, was admitted into the Hospital on the 24th January 1865, with a three months' intermittent fever and a four days' cough.

His spleen and liver were enlarged and painful, but his bowels were in good order. He continued low and delirious till the 31st, and on the 1st February, besides, became loose in his bowels. On the 2nd he had had five loose fæculent

stools; on the 3rd, six, but mixed with some scybalæ of the colour of mashed turmeric; on the 5th, many, scanty, thin, and yellowish; and henceforth seven or eight motions a day, until the 17th, when he got a severe pain in the left side of his chest, and died the next day.

At the *post mortem* examination it was discovered that the left lung was congested, and serous fluid effused into the left pleural cavity; three or four small ulcers covered with *granular exudation* occupied the cæcum and the sigmoid flexure; the rest of the mucous membrane of the large intestine was pale and thickened, with *some of its solitary follicles filled with a clear serum, others burst and giving rise to ulcers, isolated or confluent.*

Case VI.

Dysentery, carbuncular, with sub-mucous Cellulitis, Abscesses and Sloughing, and gangrene of the Mucous Coat.

Debee Singh, a Hindu Durwan, 35 years old, was admitted into the Hospital on the 16th February 1865, with a five days' dysentery, passing 20 to 25 stools a day, and complaining of a pain in the right hypochondrium. He grew rapidly worse and died on the 18th.

At the *post mortem* examination 10 hours after death, weather hot and sultry, the following notes were taken: On opening the large intestine its mucous membrane was found pale, but covered with a great number of ash-coloured, or rather dark-olive, sloughs of very small size; on cutting through these sloughs, the knife passed into *depôts of pus* in the sub-mucous cellular tissue; the pale portions of the mucous membrane were in many places raised into prominences, on cutting through which the *sub-mucous tissue was found engorged with inflammatory effusion,* and quite distinct from the mucous layer above, which was unaffected; this cellular tissue in many places was also *infiltrated with matter,* which easily oozed out through holes in the mucous membrane; in some places the *matter had formed regular depôts;* in others, where the superficial mucous membrane was completely removed, *cavities* were seen exposing *sloughs at their bases infiltrated with pus.*

Case VII.

Dysentery, phlegmonous, acute, with sloughing and congestion of the Mucous Coat.

Denoo, a Mahomedan beggar, 50 years old, and subject to a cough for a year and a half, was admitted on the 15th December 1864, with a six days' dysentery, passing blood and slime constantly day and night. His respiration was difficult; pulse frequent; abdomen painful, but flat and not very tense; expectoration composed partly of aerated mucus and partly of thick sputa; and the tongue moist, clean at tip and edges, covered with a rough fur on the surface, and pitted longitudinally.

On the 17*th* it was stated that he had had many stools, which, on being washed, yielded red gelatinous mucus mixed with some fæcal matter. He was complaining of great weakness, and his pulse was very soft.

On the 18*th* he was still passing many stools, which, on washing, yielded three to four ounces of red glatinous mucus, but no blood clot or slough.

On the 19*th* he was passing stools into the bed-clothes, one only being saved, of a grumous-blood clour, which on washing yielded larger and more numerous fæcal lumps, an ounce of red gelatinous mucus, and one blood-clot, but no slough. The motions were still attended with straining; abdomen soft; epigastrium dull, hard, and slightly painful; pulse small and feeble; tongue pinkish, marked by irregular transverse and longitudinal pits, covered on the surface by a little granular fur.

On the 20*th* the stools were still very numerous, and yielded, on washing, about two ounces of red gelatinous mucus, but no blood-clot or slough; their fœtor was getting very offensive.

On the 21*st* the pulse was sinking, and the cæcal and epigastric regions were dull, hard, and painful; stools as before.

On the 22*nd* he had expired.

At the *post mortem* examination, the following facts were noted: On opening the abdomen, the cæcum was found to be one mass of sloughs, and there were sloughs also in the

ascending and transverse colon; the mucous membrane of the descending colon and sigmoid flexure was merely congested; but there were four to five pretty large ulcers in the rectum covered with ash-coloured sloughs, which, though partially hanging loose, did not seem to have altogether separated in a single case. The mucous membrane of the stomach and small intestines presented also a good deal of congestion; the stomach was full of mucus looking like ordinary phlegm; and so also the small intestines, but in the latter case the mucus, being removed and mixed with water, gave rise to the peculiar appearance of what are called rice-watery stools of cholera, which did not occur with the stomach mucus.

Case VIII.

Dysentery, erysipelatous (sloughing).

Thomas Karr, an English painter, 17 years old, was admitted into the Hospital on the 18th August 1864, with a three days' fever and diarrhœa.

On the 19*th* his pulse was 120, small and weak, tongue furred, bowels still loose, and the whole body, face and extremities, had become covered from the night with patches of a red papular eruption, which disappeared under pressure and returned on the pressure being withdrawn. By 4 o'clock in the afternoon this eruption had completely disappeared.

On the 20*th* the bowels were still loose, but the fever had subsided.

On the 21*st* the bowels were moved twice, epigastrium full, liver projected into it three inches below the ensiform cartilage and was very painful on pressure; complexion slightly jaundiced; tongue covered with a dirty grey fur, dryish, and dull red at edges; skin harsh and hot; countenance expressive of suffering; pulse 112, very small and feeble, but regular.

On the 23*rd* there was no more hepatic tenderness, which had been removed by leeches, purgatives, and a little blue pill, gentian and opium. But the pulse was 100, bowels moved three times, and there was some gurgling in the cæcum.

On the 24*th* he was stated to have had two stools, slimy, scanty, and bloody; his abdomen was cylindrical, rather tense, painful on pressure over the cæcum, and gave a tubular note

on percussion; tongue moist, but very dirty; skin dry, but of ordinary temperature; pulse 96.

On the 25th he had passed a sleepless night, and 11 stools, small, slimy, and containing some thin fæces.

On the 26th he passed many stools, and the cæcal region was dull and painful.

After this he went on getting five or six stools daily till 5 P. M. of the 29th, when there occurred a large hæmorrhage from the bowels.

On the 30th the bleeding had stopped by the action of astringents, and he had passed two or three stools in the bed-pan mixed with fæcal matter.

On the 31st he had 10 stools without griping or straining, and free from blood.

On the 1st September he voided two *pus-infiltrated sloughs*, the largest 1¼ inch long and 1 inch broad, with a little dark deposit on the surface; and 2 ounces of fæcal lumps.

On the 2nd he had passed nine pieces of slough, three large, six about the size of an 8-anna piece each, which hung out from the fundament after each evacuation and had to be pulled out by the finger and put into the bed-pan; also some fæcal lumps and 1½ ounce of blood-clots; the cæcum, and ascending and transverse colon were very painful and tender, but elsewhere the abdomen was soft and flat; the urine was passed without difficulty; heetic spots were observed on the cheeks; the tongue was dryish and dirty; skin warmer than natural; thirst considerable; pulse 108, small and weak.

On the 3rd the parts of the abdomen already mentioned were more painful; stools five or six, containing two pieces of slough with shreddy margins and infiltrated with blood, and two blood-clots.

On the 4th he felt better; had no tenderness in the cæcal region; was sleepy, as he had not slept in the night; had passed only one small slough, but no blood-clots, with the stools, which were four in number, liquid and yellow.

On the 5th the pulse was at 80, small and weak; stools three with only one piece of slough; tension and tenderness of the abdomen much less; appetite voracious, which made him beg food of his neighbours; skin moist, very slightly warm.

On the 6th he had passed eight pieces of pus-infiltrated slough, the largest $1\frac{1}{2}$ inch long, and a few fæcal lumps; at 5 P. M. he had a great pain about the loins.

On the 7th he had had six stools, which yielded on washing a great many sloughs, the majority of small size, three very large; the biggest piece was about 5 inches long and at the widest part $2\frac{1}{2}$ inches broad, thick, dirty yellow and pus-infiltrated; a second 3 inches long and more than 1 inch broad, shaggy at the edges, also dirty yellow and pus-infiltrated; a third about the same length but pyriform, at the base $1\frac{1}{4}$ inch broad, at the apex $\frac{1}{2}$ inch, carbonaceous, also pus-infiltrated; a fourth of medium size, as big as a rupee, and shaggy throughout; besides these there were three small clots of blood and some fæculent matter.

On the 8th he had passed four stools with some small pieces of slough.

On the 9th his pulse was 100, small, tremulous, irregular; abdomen tympanitic, but painless; stools contained sloughs, one moderately large and ecchymosed, others small, partly white, partly greyish, exuding pus on pressure; in the afternoon he was groaning with a pain in the right hypochondrium.

On the 10th he was growing feebler.

On the 11th he was moaning a good deal; the stools consisted of thin liquid fæces containing only one slough of the size of a rupee; pulse 96; abdomen cylindrical, but soft and not particularly tender.

On the 12th, he felt better in the morning; his pulse was 84, small and soft; abdomen full and soft, and he had passed a *large tubular slough* with his stools, 4 inches long and 2 inches broad, with the aperture nearer the upper end, and a little dead sub-mucous cellular tissue hanging out from the outer surface. He was insensible at 3 P. M. and died at 5.

At the *post mortem* examination it stands recorded that the cæcum, ascending colon, and a part of the transverse colon were one mass of sloughs, so much so that they could not be taken out entire from the abdominal cavity; the sloughs were in the mucous membrane, pus-infiltrated, and in every respect similar to those passed during life.

Case IX.

Dysentery, gangrenous (of the Mucous Coat).

Hurdah, a Hindu sweetmeat seller, aged 35 years, extremely prostrated, was admitted into the Hospital on the 18th September 1864 with a 12 days' dysentery, passing 20 or more involuntary liquid stools a day. His pulse was 60, weak and very irregular; skin cold and clammy; heart sounds irregular, and there was a cadaverie smell about the body. He rapidly sank, and died on the 21st September.

At the *post mortem* examination the mucous membrane of the large intestine presented some unhealthy looking denudations and a great mass of thin *carbonaceous sloughs* still undetached, extending round the whole calibre of the tube. The heart was quite healthy.

Case X.

Dysentery, gangrenous, (of the whole thickness of the intestine) and follicular, (with consecutive peritonitis).

Thomas Murray, an English Sailor, aged 36 years, was admitted into the Hospital on the 29th November 1864, with a 10 days' dysentery, passing several scanty stools with considerable straining. He was very low and feverish, and in the course of the day commenced to discharge a great deal of blood with large liquid motions.

On the 30th he was very restless, and there was a cadaverie fœtor about his person; his tongue was black, dry, and furred; pulse extremely feeble; stools liquid, red, about a night-pan full, with sediment containing about an ounce of blood-clots; micturition painful; hypogastrium dull and tender; cæcal and colic regions soft and not particularly sore; sigmoid flexure indurated, tender, and felt by the patient like a coal of fire. Throughout this day he continued to pass many stools with a great deal of blood.

On the 1st December he was still losing blood.

On the 2nd December the hæmorrhage continued unabated; the evacuations were red and liquid, with a sediment of three or four blood-clots, a large ragged carbonaceous slough, and three or four smaller pieces of the same kind; and the fœtor of his

body was getting worse and worse; about a quarter to four in the afternoon he expired.

At the *post mortem* examination 10 hours after death, the abdomen being opened, the whole of the large intestines from the cæcum to the rectum were found excessively thickened and adherent to the neighbouring parts by recent lymph. The gut was in a gangrenous state throughout, for on attempting to detach it from the surrounding structures, it gave way in several places. From the cæcum to the sigmoid flexure the intestinal coats were black and sloughy. The interior of the rectum was studded with numerous small ulcers, beginning evidently in the solitary follicles, for many of them were white, prominent, and solid. Near the sigmoid flexure the bowel was almost dissolved, but no actual separation or extravasation had taken place, although lymph was effused between several coils of the small intestine. The other organs of the body were quite healthy.

Case XI.

Dysentery, gangrenous (of the Mucous Coat).

Jadoo Dey, a Hindu domestic, aged 40 years, was admitted into the Medical College Hospital on the 17th May 1865, with a 10 days' dysentery, passing several bloody stools a day, and complaining of pain in the abdomen. He was very low and his pulse very feeble. There was a good deal of tenderness in the course of the large intestines, and the body exhaled a very offensive cadaveric smell. The stools consisted of a large quantity of a grumous and offensive liquid, which, being washed, yielded *a few small ash-coloured thin flaky sloughs.* During this day he passed many stools of the same kind and continued to sink.

On the 18*th* the stools had become black and still more offensive, and in the portion saved there were one thin black ragged slough and several smaller shreds.

On the 19th the stools gave three or four blood-clots, and two thin black ragged sloughs.

On the 20*th* the body was covered with a clammy perspiration; pulse barely perceptible; stools numerous, incessant, liquid, muddy-coloured, highly offensive, putrilaginous, giving on washing a great number of thin black ragged

sloughs varying in length from 1½ inch to ⅛ inch, and in breadth from half an inch to one or two lines. He died this day at 2 o'clock P. M.

At the *post mortem* examination 20 hours after death, the mucous membrane over the prominent folds of the large intestines was in a state of gangrene; the sloughs still present in the bowel were black, thin, ragged, and of the same character as noticed in the stools during life; the intervening portions of the mucous membrane were pale and unaffected, there being no thickening or any other alteration visible in them; the interior of the cæcum formed one black mass without any intervening healthy spots; the sub-mucous tissue in places, whence the mucous coat had been removed by sphacelation, appeared white and infiltrated with serum; but there were no depôts of matter to be seen anywhere.

Case XII.

Dysentery, chronic or textural, with abraded ulcers, congestion, ecchymoses, softening and thickening of the mucous membrane.

Humeed, an unemployed Mahomedan, aged 29 years, was admitted into the Hospital on the 5th February 1865, in a moribund condition, with a four months' dysentery, passing stools into his bed-clothes; and died the following morning.

At the *post mortem* examination 10 hours after death, the mucous membrane of the large intestines generally was found thickened and softened; at the lower part near the rectum it was pale with here and there a few spots of ecchymosis; higher up it was more or less irregularly congested, and scattered over its surface there were several very minute ulcers, evidently commencing in abrasions of the mucous membrane, for there were found little blood-clots, and ecchymosed spots concealing blood-clots, the surface underneath of which in both cases was slightly eroded. The small intestines were quite healthy.

Case XIII.

Dysentery, textural, with abrasions, congestion, ecchymoses, and thickening of the mucous membrane, and round worms.

Bachu, an unemployed Hindu, aged 28 years, was admitted in a very low state on the 2nd February 1865, with a 15 days'

diarrhœa. He had had fever 1½ month before his present illness. He had had only two or three motions a day from his admission to the 7th, on which day he died after vomiting a few times.

At the *post mortem* examination four hours after death, the mucous membrane of the large intestines was found highly congested and thickened, and, scattered over its surface, there were numerous ecchymosed patches, each about the size of half a rupee, presenting in their centre little ulcerated spots. The stomach also was thickened, and the small intestines congested here and there, with their Peyer's patches in parts inflamed but never ulcerated. Some four or five live round worms were found in this gut.

Case XIV.

Dysentery, chronic or textural, with thickening and minute ulcers of the mucous membrane, cirrhosis of the liver and spleen, Ascites.

Joordah, an unemployed Hindu, aged 24 years, was admitted into the Hospital on the 31st January 1865, in a very low state, with a month's dysentery, passing several stools a day with griping, and complaining of pain and distension of the abdomen. He had no fever, but his hands and feet were œdematous. He lingered on for three days more and died on the 4th February.

At the *post mortem* examination, the mucous membrane of the large intestines generally was found to be *thickened* and covered with *minute ulcers;* the Peyer's patches of the small intestines were healthy; the peritonæum contained six *pints of clear serum;* and the *liver and spleen were contracted and hard.*

Case XV.

Dysentery, with thickening, transverse ulcers and denudations of the mucous membrane.

Bhageer Chand Singh, a Rajput Durwan, aged 40 years, was admitted into the Hospital in a moribund state on the 2nd February 1865, with a 16 days' dysentery and two months' fever. He was cold and clammy and scarcely able to speak.

On the 4th his stools had been saved, which on examination were found to be liquid and grumous, with a sediment chiefly of shreddy lymph, and partly of gelatinous mucus, and lumps of mucus and colouring matter. He died this day between 10 and 12 P. M.

At the *post mortem* examination, the mucous membrane of the cæcum and ascending colon was found thickened and covered with transverse ulcers here and there, of the transverse colon and sigmoid flexure almost entirely removed, except some patches here and there.

Case XVI.

Dysentery with rodent circular ulcers of the mucous membrane of the colon, and thickening and ecchymosis of that of the cæcum.

John Smith, an English Seaman, aged 15 years, was admitted on the 21st August 1864, in a very low state, with a seven days' dysentery, passing seven or eight stools in the 24 hours, slimy and bloody, with considerable griping and straining.

On the 22nd his countenance was flushed; pulse from 140 to 144, small and weak; tongue moist, full and thickly furred; stools twelve; pain in the iliac regions.

On the 23rd he had had seven stools, and the griping and straining had left.

On the 24th he had had three fæculent stools; his abdomen was very tense, dull and tender; body clammy; pulse sinking. He died at 4 P. M.

At the *post mortem* examination, the whole tract of the colon was found covered with circular ulcers, majority of the size of 8-anna pieces, and a few of 4-anna pieces; the base of the ulcers being in the sub-mucous cellular tissue. The mucous membrane of the cæcum was considerably thickened, and it contained one or two ecchymosed spots. The other organs were healthy.

Case XVII.

Dysentery, chronic or textural, with circular ulcers and contracted cicatrices, perforation of the transverse colon, jejunum and duodenum, matting of the omentum and mesentery, and round worms.

Oorjollah, a Hindu maidservant, aged 25 years, was admitted into the Hospital on the 14th June 1864, with a month's dysentery. She had a weak pulse, sore mouth, and pain on pressure in the iliae regions.

From her history, it appeared she had had fever, with pain in the joints, whieh lasted for ten days, two years ago; and was salivated thriee, the last time only six months ago, whieh still eontinued.

On the 17th it is reported she had had fever the day before from 4 o'eloek P. M. to midnight; it eommenced with shivering and passed off with perspiration; had had ten stools in the 24 hours with griping and straining; and the salivation still eontinued.

She eontinued to get her fever and seven to nine stools daily, the soreness of her mouth at the same time growing worse, until the 24th, when she died a wretehed death.

At the *post mortem* examination, on opening the abdomen, the duodenum, jejunum, and colon, with the omentum and mesentery, were found to form a confused mass, being agglutinated and blaekened; opposite the middle of the transverse colon, from an aecidental rent in the duodenum, there projeeted a large round worm; on slitting up the duodenum above this rent near the pylorie end of the stomaeh, a large quantity of a slimy substanee like ehyme flowed out; on taking out the agglutinated portions of the intestines and slitting them up, the remains of three tubes, one above the other, were distinetly brought into view in eonneetion with their healthy portions beyond the seat of what appeared to be the disease; the omentum here seemed to be thiekened, and to have formed the matting material. In the large intestine, whieh formed the lowest tube, was found a large eireular uleer with plieated edges, the mucous membrane being eut abruptly in some plaees, in others beeoming gradually more and more deeply uleerated from the eireumferenee towards the centre; towards

the left side, that is, in the direction of the descending colon, was found a cylindrical promontory of healthy membrane; on the opposite side there were little roundish islands of the same kind; the base of the ulcer was of a dark colour, and in its very centre was situated a perforation which directly communicated with the tubes above described. The interior of the middle tube, formed by the jejunum, was of a dark colour for about 5 inches, the mucous membrane being wanting over an extent of $2\frac{1}{2}$ inches, and its situation occupied by a yellowish deposit, mostly in masses of the size of mustard seeds; opposite to the perforation in it communicating with the transverse colon, there was another of the same size leading into the third tube formed by the duodenum. The duodenum opposite to the above perforation was diseased for about an inch, its mucous membrane was gone, sub-mucous tissue in a state of black slough, and the peritonial coat irregularly rent. There was no disease in any other portion of the duodenum or jejunum. The large intestine, however, presented a different state. Both above and below the perforation, it was the seat of other circular ulcers and cicatrices. The cicatrices above were particularly contracted and corrugated, except in one place, where there was an ulcer of the size of a rupee with its vessels red and congested, and its surface covered with a pellicle of lymph. The vermiform appendix was very large, and at its junction with the cæcum, there was a black ulcer; but its interior was solid. The iliocolic valve was healthy, and so also the ilium immediately beyond. The ulcers in the colon below the perforation were larger and more unhealthy looking, the mucous membrane being wanting in the entire calibre of the tube in two places with a great contraction of the walls reducing very considerably the size of the canal. Four large live lumbrici escaped from the divided intestines.

Case XVIII.

Dysentery, Chronic follicular, with small black ulcers and cicatrices of the mucous coat, abscesses in the liver, which had discharged and cicatrised, and an abscess in the pelvis and substance of the right kidney.

Henry Linden, an English Steward, aged 26 years, was admitted into the Hospital on the 5th May 1864, with a

looseness of the bowels of five days' standing, passing three or four stools a day, and a severe pain in the left iliac region. He was so bad that he could not walk about on account of this pain.

The looseness and the pain continued to trouble him more or less irregularly, in spite of all remedies, until May 29th, when it was stated he had had a severe fit of cough about 2 o'clock yesterday while sitting at stool, and in about two minutes commenced to expectorate freely a thick purulent matter in regularly formed lumps, and ever since then has continued to expectorate matter of the same kind, the whole quantity thrown up being about two ounces. At the time of writing the report, the cough was less violent and the expectoration also less free. He said that he had then a good deal of pain in bringing up the matter, and he was very tender in the left infra scapular region. On applying the stethoscope to the left infra and inter scapular regions, no respiratory murmurs were heard.

On the 30*th* he had had two stools, and brought up very little matter, and had slept well during the night.

On the 31*st* he had slept badly, but his cough and expectoration were less, and he had had only one stool; his urine was transparent, of a straw colour, good in amount, frothy on the surface, but without any deposit.

After this he went on improving pretty steadily till the 8th of June, on which day he had two stools and a very troublesome cough, along with a severe and constant pain in the right lumbar region, spreading down to the innominate bone, and more purulent expectoration which had before ceased.

On the 9*th* he had had no stool and was a little easier.

On the 10*th* he had three good stools, but complained again of pain, cough, and expectoration.

He continued now much in the same state with two or three stools a day, the cough gradually ceasing, and the pain sometimes better, sometimes worse, till the 11th July, on which day he had five stools and commencing hiccough.

On the 12*th* the hiccough continued, and he had had up to the morning visit seven stools, and complained of pain across the abdomen.

On the 13*th* he had had, since the previous day, altogether 31 stools, soft and fæculent; and a good deal of tenderness in the right iliac fossa.

On the 14*th* he had pain in both the iliacs, and passed some 18 slimy and bloody stools.

On the 15*th* he had had 30 fæculent stools.

On the 16*th* only two, and on the 17th none.

After this he went on again pretty comfortably, getting only two or three stools a day till the 24th August, but from the 25th August to the 4th September, the bowels were again loose, at first badly, then gradually less and less, till on the 5th again he had no stool. On the 8th he had three stools, on the 9th seven stools, and vomited four times a bilious matter. The looseness gradually increased until on the 16th he had had 20 stools.

On the 17*th* his liver projected about 2 inches into the abdominal cavity; he had involuntary startings of the hands; his lips and teeth were covered with sordes; pulse 108; cadaverie smell about the body; commencing stupor; and had had numerous thin liquid stools.

In the course of this day he rapidly sank and died about 5 P. M.

At the *post mortem* examination 15 hours after death, the cadaverie rigidity still continued, less in the upper than in the lower extremities. On opening the abdomen the liver was found to occupy a large space projecting within 3 inches of the umbilicus; its surface was mottled light yellow and pink; its outer surface on the right side inferiorly was adherent by old cellular membranes to the surrounding structures, and posteriorly it was stained deep purple; the gall bladder was distended with bile to the size of an ordinary sausage; the left lobe of the liver was adherent posteriorly and superiorly by false membranes to the diaphragm and spleen: the measurements of the liver were transversely 12 inches, vertically 9 inches, antero-posteriorly at the convex edge 4 inches; the upper part of the left hepatic lobe was drawn out into a firm thin broad plate; the substance of the liver was very fragile, having cracked in many places in taking out the organ; on cutting through the thickest part

the section presented a nutmeg appearance and a watery fluid ran out of the divided veins; a puckered cicatrix was found on the outer surface of the right lobe about 2 inches above the lower border corresponding to the 10th or 11th rib; another cicatrix on the left lobe on its outer surface about the middle; a third 1 inch external to the last; on the under surface of the left lobe about 2 inches from its extreme convexity was a linear cicatrix more than 2 inches long, forming a depression extending from its outer edge upwards and inwards; an abscess was found about the angle of flexion of the hepatic flexure of the colon situated close to the spine, containing a large quantity of matter apparently laudable, unconnected with the liver; but on further dissection traced to the right kidney.

On cutting through the parietes of the abscess, it was found to occupy the pelvis and a portion of the renal substance proper, the size of the kidney being much enlarged.

The left kidney was also a great deal enlarged, its substance on section appeared paler and more flabby than usual; and its pelvic membrane was dull white but free from pus.

The spleen was not much larger than natural, but, on its outer surface, it was firmly covered by a false membrane and a portion of the liver; on section, its substance was found healthy.

The mucous membrane of the large intestines was closely studded with numerous black ulcers and cicatrices of small size, evidently connected with the solitary glands which were white, prominent and solid, the intervening portions of membrane being tolerably healthy; the mucous membrane of the small intestines, except being red-stained here and there in the ilium, was quite healthy.

Case XIX.

Dysentery, chronic, with circular ulcers of the large intestine, and acute cellulitis, ending in an abdominal abscess.

Chunder Mohun Sirear, a Hindu Shop-keeper, aged 33 years, was admitted into the Hospital on the 20th April 1865, with a hard painful swelling in the usual situation of the cæcum which he said commenced to form three months before simultaneously with a griping pain in his bowels.

On the 20th his bowels were confined; tumour very tender; he had griping and straining, eructation and nausea, but no vomiting.

On the 21st he had had only two stools by castor oil, and the tumour was less painful and smaller.

On the 22nd two stools; swelling somewhat diminished.

On the 27th five stools; tumor still decreasing.

On the 29th the tumor was much the same as last described, but he had had two stools and vomited twice, and was troubled with acid eructations.

On the 30th he stated that he had had 13 liquid stools in the previous 24 hours; felt feverish the evening before, and vomited twice; the tumor in the right iliac region was more diffused and painful, but less prominent, and, though suspected, no fluctuation was clearly made out owing to muscular tension; body dry and emaciated; tongue dull-red and slightly furred; respiration somewhat hurried.

As the bowels had been well cleared first by repeated purgatives, afterwards by spontaneous evacuations, without any material influence on the tumour, and as I had a strong suspicion that an abscess had formed, after consultation with my colleague, Dr. Fayrer, I cut down upon it and found a large abscess extending inwards to the mesian line, upwards to the lateral line of the right loin, downwards to the iliac bone, which itself, however, was not uncovered, and forwards very slightly, not reaching Pouparts ligament. A good quantity of very thick matter was thus let out, which afforded great relief to the patient. After this the discharge of matter increased day by day, while the looseness of the bowels also went on without arrest, until, completely worn out, he died on the 4th May.

At the *post mortem* examination a long exploring needle being pushed high up through the front wall of the rectum, it returned with evidences of matter. On opening the abdomen and introducing a finger into the abscess, this was found to lie external to and behind the cæcum and coils of intestine, immediately in front of the iliac portion of the right innominate bone, extending from its outer border to the sacro-iliac symphysis, and from its upper margin to within an inch of the anterior superior spine. The cavity of the

abscess was irregular in form from projection into it of intestinal coils which lay in its walls: and on cutting it open, it was found to communicate by a very small orifice, evidently just formed by gangrenous dissolution, with the interior of the ascending colon, for its contents presented no fæcal character. In the immediate vicinity of the abscess, several coils of the small intestine as well as the large were matted together, and bound down by organized lymph. On slitting up the large intestine, several old circular ulcers were discovered in the cæcum and colon, one of which was situated right against the orifice which communicated with the abscess.

Case XX.

Dysentery, chronic, with congestion and transverse ulcers of the Mucous Coat. And Bronchitis, and pulmonary congestion and œdema.

Goluck Chunder, a Hindu bottle-seller, aged 38 years, was admitted into the Hospital on the 29th October 1854, with a month's dysentery and fever, passing about seven slimy and scanty stools a day, and greatly emaciated.

On the 30th his extremities were œdematous and he had had only two stools.

On the 31st, seven loose stools with griping.

From the 1st to the 17th November he continued much in the same state with occasionally a stool more or a stool less.

On the 18th he commenced to cough and expectorate purulent sputa.

On the 19th he had had five stools; and the expectoration was still purulent, but frothy and mixed with blood.

On the 21st he had had several stools; and the sputa were partly aerated, partly non-aerated, the latter of a brownish yellow colour, slightly tinged with blood.

On the 22nd he had had many stools; his respiration was difficult; pulse very feeble, evidently sinking.

He died on the 24th November.

At the *post mortem* examination two hours after death, the left lung was found adherent by old cellular membranes, and, on dividing it from apex to base, its substance appeared con-

gested, but not otherwise altered. The right lung was rather œdematous. On slitting up the trachea and bronchial tubes their lining membrane was found congested, and their interior full of a sanguinolent secretion except the right bronchus which contained creamy looking pus. The mucous membrane of the large intestine was throughout deeply injected, and in the rectum covered with ulcers, some of which extended completely transversely across. Portions of the small intestines were also congested, and the Peyer's patches were unduly prominent and congested.

Case XXI.

Dysentery, follicular, with minute ulcers, and intercurrent Pneumonia.

Doomsha, a Hindu cooley, aged 30 years, was admitted into the Hospital on the 24th January 1865, with an eight days' diarrhœa, passing some three or four stools daily. He was very emaciated, his hands and feet were œdematous; and pulse weak.

On the 25th his tongue was dry and furred; and he had had several scanty stools in the night.

On the 26th he had also had several stools, which were a brownish fluid mixed with bile, slime and blood; tongue less furred; and he complained of feeling nausea.

On the 28th he had had two stools, consisting of a brownish fluid, with a yellow sediment, but no blood or slime was observed in the stools, and although there was griping, there was no straining. Appetite good; he felt better.

On the 29th he was better but very hungry.

On the 30th he had had many stools, passed in the bedclothes mostly; and was very feeble.

On the 31st he had again had many stools, and died about 11 P. M.

At the *post mortem* examination, on opening the chest, both the lungs were found uncollapsed, and more or less adherent to the parietes.

On the anterior surface of the upper lobe of the right lung near its inferior third, there was found effused a quantity

of fresh lymph not yet separated into solid and fluid, and the pulmonary substance under this was in the state of red hepatization, a portion of which, being thrown into water, rapidly sank; the lower lobe was only congested. The left lung was apparently healthy.

The whole of the mucous membrane of the large intestines was studded with minute ulcers which distinctly began in the solitary glands.

Case XXII.

Dysentery, with mammillated ulcers, and tubercular disease of the lungs.

Puteet, an unemployed Hindu, aged 18 years, was admitted into the Hospital on the 6th December 1864, with a three months' dysentery and fever, passing some five stools a day, and coughing more or less, having lost much flesh and strength at the same time.

On the 7th he had had three stools.

On the 8th it was found he had also a chancre. He continued to get four or five stools and fever every day, and sinking gradually until the 27th, when he died.

At the *post mortem* examination, on slitting up the intestines there were found one large mammillated ulcer in the cæcum, two in the ascending colon, one in the sigmoid flexure, two in the rectum, a large one in the ilium about two feet from the cæcum, and two or three smaller ones higher up.

A small number of tubercles was found in both lungs, and three or four small cavities in the apex of the right.

The spleen was smaller than usual.

Case XXIII.

Dysentery, with thickening, uniform congestion, corroding ulcers, cicatrices, and stricture of the colon, and tubercular disease, congestion, and gangrene of the lungs. Arborescent congestion of the mucous membrane of the small intestine, congestion, tubercular deposit and ulceration of the Peyer's patch next to the ilio-colic valve.

George Davidson, a Scotch Seaman, aged 44 years, was admitted into the Hospital on the 1st December 1864, with

a four days' dysentery, passing scanty bloody and slimy stools with considerable griping and straining, and a two days' intermittent fever. He was apparently not much prostrated, though his pulse was weak, body warmer than natural, and tongue furred.

On the 2nd he had had several stools, scanty, bloody, and slimy, with much griping and straining; and his appetite was bad.

On the 4th he had had 26 stools of the same character as before, and a return of fever.

On the 5th he had had fever again, and 26 fæculent stools without griping.

On the 6th the stools were the same as on the previous day, but not counted; but he complained of cough and expectorated some sputa, partly aerated and partly non-aerated and yellow. He had had no fever.

On the 7th he had had 26 fæculent stools; and there were choreic movements of his head.

On the 8th he had had 30 yellowish stools which gave no sloughs or blood-clots on being washed; he had vomited all his medicine; his pulse was 100, small and weak; and the choreic movements of the head were less.

On the 9th he had had more than 25 stools, thin, fæculent, and brownish, without blood-clots; no return of fever; percussion note of the right infra clavicular region was dull, over the rest of the chest good; respiratory murmurs good but harsh in the right mammary and infra mammary; supra-scapular clear on both sides, in the right there was a little blowing sound; mucous rhonchus in the right inter-scapular, none in the left; blowing respiration in the right infra scapular, especially near the posterior and inferior angle of the scapula; left infra scapular respiration good; right infra axillary murmurs nil; expectoration purulent.

On the 10th he had had ten stools; but the expectoration was more free and of a dirty reddish colour.

On the 11th the expectoration was greenish yellow and very offensive; and there were blowing respiration and mucous rhonchus next to the inferior angle of the right scapula as before. He had had about 30 stools.

On the 12*th* he had had about 40 stools; his cough was troublesome; expectoration about 5 ounces, offensive and light yellow.

On the 13*th* the stools were about the same number, but thin, and contained gelatinous and ropy mucus. Cough troublesome. Expectoration about five ounces, diffluent, fœtid, and dirty yellow.

On the 14*th* he was passing stools constantly under him and complained of extreme weakness; his body and forehead were covered with a cold sweat; countenance cold, livid, clammy; expectoration offensive, muddy-coloured; respiration excessively hurried, 84 in the minute; pulse imperceptible at the wrist.

He died this evening.

At the *post mortem* examination, on opening the large intestines, the interior of the cæcum seemed to be occupied by several cicatrices and ulcers; some of the latter, after destroying the mucous and muscular coats, had reached the peritonæum, which, over one of them, was torn; about the middle of the transverse colon there was a bandlike contracted cicatrix through the entire girth of the tube; another about the point of flexion where the transverse joins the descending colon; the mucous membrane between these cicatrices, as well as below them, was of a buffy colour, considerably thickened and velvetty, with patches of injection of varying sizes. The mucous membrane of the small intestines was congested in an arborescent manner; the Peyer's patch in the ilium next to the ilio-colic valve was somewhat swollen, and on its surface there was an ulcer of the size of a mustard seed and many whitish solid prominences of the same dimensions; no other patches affected elsewhere.

The liver appeared to be larger than natural and congested, the little lobules appearing through the peritonial capsule yellow in the periphery and pink in the centre; its upper surface was of a dark colour; and its substance free from abscess.

The right lung was adherent only at the apex, where there was a large old cavity lined with a smooth shining membrane; the lower lobe was enormously enlarged and expanded, of a mottled purplish and black colour, with a whitish patch

on its posterior aspect about 2 inches below the level of the apex of this lobe and 1 inch from its upper and inner margin; this patch was formed by a thickened layer of false membrane, which could be peeled off; on making a section through it the knife passed into a cavity full of a very offensive fluid; the walls of the cavity were ragged and non-indurated; on dividing the lung substance below this point it was found congested, and its bronchial tubes full of a greyish looking deposit like crude tubercles; on the lower surface of the middle lobe there was another gangrenous cavity with non-indurated walls: the left lung was universally adherent, so much so that the tissue broke down in removing it; on section of its substance no tubercular matter was discovered anywhere, but the parenchyma was a good deal congested, though not hardened.

Case XXIV.

Dysentery, uræmic, following cholera. Retiform congestion of the mucous membrane.

Alkhooree, a Hindu cooley, aged 40 years, was admitted into the Hospital on the 11th February 1865 on the third day of cholera.

On the 12th he had had seven scanty, bloody stools with severe griping; no urine at all since the onset of cholera on the 9th; no vomiting or cramps for more than 24 hours; pulse scarcely perceptible; body warm, but extremities cold; and a good deal of hiccough.

On the 13th he had still made no urine; passed only three stools since last report; vomited twice; his abdomen was tense; eyes sunken; pulse barely perceptible; and he was getting very restless in bed.

About the middle of this day he died.

At the *post mortem* examination there was found retiform congestion of the large as well as the small intestines, but no separate affection of the Peyer's patches; liver and kidneys enlarged and congested; but the spleen remarkably small and shrivelled, measuring only 2 inches in length and 1½ inch in breadth.

Case XXV.

Dysentery, chronic, with atrophy, ramiform injection, thickening, softening, irregular and transverse ulcers, and follicular cysts of the mucous coat of the large intestine.

Gopal Kurmokar, a Hindu Iron-smith, aged 30 years, was admitted into the Hospital on the 16th June 1864, with a two and a half months' dysentery, passing daily 10 or 11 seanty, slimy, and bloody stools with eonsiderable griping and straining. He had been subjeet to a fever more or less for 13½ months, and was very anæmie.

On the 17*th* he had had five stools.

On the 18*th* he died in the forenoon.

At the *post mortem* examination the mucous membrane of the cæeum, aseending and transverse eolon, was found pale and thin, with patehes of ramiform injeetion mostly lying against the longitudinal museular bands or the attaehment of the mesentery; that of the deseending colon, sigmoid flexure and reetum, more espeeially the latter, thiekened, softened, and eovered with minute irregularly shaped uleers with sharply eut edges, penetrating as far as the museular coat in the reetum, shallow elsewhere, varying in size, some as big as a two-anna piece, some smaller and rather long—their long diameter lying aeross that of the intestinal tube, and some smaller still, these seareely exeeeding in size so many mustard seeds, and gradually merging in the solitary glands, whieh appeared to be swollen, and, where entire, eontaining a transparent fluid very like the phyctenæ on the skin. These vesieles in some places seemed to have burst and given rise to cavities or uleers, whieh again seemed to have extended by inflammatory absorption.

Case XXVI.

Dysentery, chronic, tubercular, with a single elevated tubercular ulcer and uniform congestion of the mucous membrane.

Lutchmee, an unemployed Bengali woman, aged 45 years, was admitted into the Hospital on the 24th May 1864, with a four months' dysentery. She was very thin, weak, and anæmie; and had œdema of the feet, and pain and tension of the abdomen.

On the 16*th* she had had eight liquid, small, and fæculent stools of a greenish colour.

On the 18*th* she had had no stool.

After this date she continued to get daily one or two stools until the 18th June, when she died.

At the *post mortem* examination the mucous membrane of the large intestines from the cæcum to the rectum was found uniformly congested, of a pink colour, deepest in the upper part of the rectum and palest in the cæcum; about the angle of junction of the transverse and descending colon, a portion of the mucous membrane, about the size of a Rupee, was thickened and elevated, of the form of a tumulus, with an oval ulcer on one side of it. This ulcer seemed to have sharply defined edges, where the mucous membrane all round could be lifted up from the subjacent structures. Filling this cavity and partially burrowing under the mucous membrane here lay a creamy substance. This being removed, the hollow was found large enough almost to admit the point of the little finger, and into which the free extremities of the arms of a forceps went easily. On scraping this cavity more and more of the creamy material was removed; but even after this the opposite side of the base of the tumulus felt quite hard and cartilaginous. The ulcer, however, did not pass through the muscular and serous coats. The creamy substance on being placed under the microscope was found to be made up of tubercle corpuscles, masses of minute granules, and some molecules. There were no more ulcers in any other part of the intestines.

Case XXVII.

Dysentery, chronic, tubercular, with ulcers and cicatrices in the large intestines, ulcers in the Peyer's patches of the small intestines, and tubercular deposit in the mesenteric and inguinal glands and both lungs; and simple congestion of the liver.

Ramjan, a Mahomedan servant, aged 30 years, was admitted into the Hospital on the 11th February 1865, with a month's dysentery, passing from 15 to 20 scanty bloody

stools. with severe griping and straining. He died on the 7th May. During the 86 days he was in the Hospital, he continued to pass from three to seven stools a day, and never once complained of cough or any thing more than a pain in the loins.

At the *post mortem* examination 16 hours after death, the large intestines were found to contain several small ulcers and many cicatrices through their whole course. The ilium also contained about a dozen ulcers seated in the Peyer's patches, half a foot or more apart from each other. The mesenteric and inguinal glands were tubercular and enlarged to double or treble their original size; and both the lungs, more especially the apex of the left, contained scattered deposits of tubercles. The liver was congested.

Case XXVIII.

Dysentery, with diffuse sub-mucous cellulitis, suppuration and sloughing, and gangrene and sloughing of the mucous coat in front.

Shib Chunder Surokhool, an unemployed Hindu, aged 52 years, was admitted into the Hospital, on the 25th May 1865, with a 15 days' dysentery. First he was feverish, and had fulness and pain in the stomach, griping of the bowels, frequent, scanty, mucous stools, passed with straining, which, five days afterwards, were mixed with blood. From the eleventh day he had passed thin liquid fæces, which, for the last three days, was mixed with small fæcal lumps. He had also had a hiccough for 24 hours.

On the 26th he had had 15 stools, partly liquid, partly composed of a great many roundish fæcal lumps, some floating, some sunk to the bottom, and two small shaggy pieces of slough, passed with griping and straining. His hiccough was very troublesome; abdomen full and cylindrical, except between the umbilicus and the epigastrium, where there was a depression corresponding with the tight band of the *Dhotee*; the muscles, however, were soft; the left iliac region was tender, and the sigmoid flexure felt like a sausage, the rest of the colon being thickened likewise, and the cæcum thickened and lumpy. The smell of the body was cadaveric; pulse 88, thready, slightly irregular; respiration 20, chiefly thoracic;

skin dry, cool; tongue dull red at tip, posteriorly covered with a brownish fur.

On the 27th he had had 15 or 16 stools, offensive, consisting chiefly of thin fæces, and containing only two small bits of shreddy slough.

On the 28th several liquid stools, their sediment showing a few fæcal lumps, eight small pieces of slough more than half of which were of the mucous membrane and the rest of the cellular tissue, besides a quantity of mucous shreds.

On this day he continued to grow worse and worse, and died a little after midnight.

At the *post mortem* examination nine hours after death, weather sultry and oppressive, cadaveric rigidity full in all the extremities, on opening the large intestine the whole of it from the Bauhinian valve to the rectum seemed to be greatly thickened; the mucous membrane in the cæcum was entirely wanting, and there were masses of cellular slough partially detached. In the ascending colon, with the exception of a square inch of a portion of the wall which was healthy, the mucous membrane was altogether gone or dead, and nothing but cellular, with occasional admixture of mucous, sloughs were found to occupy it. Besides these cellular and mucous sloughs, and here and there little islands of healthy mucous membrane, there was nothing else to be seen in the transverse and descending colon and sigmoid flexure; on the surface of the latter a mucous slough $1\frac{1}{2}$ inch square detached on all sides except one, beautifully stood out from the general level of the dead tissues. About the commencement of the rectum there was a rather large piece of mucous membrane completely separated from the muscular coat, the two forming as if it were two sides of an abscess, being lined with false membrane and pus. On trying to separate these further up, they were found adherent by cellular processes, but on cutting through the uniting bonds, presented the same appearances as in the detached portion. On dividing the intestine a few inches above this point, the space between the mucous and muscular coats was found to contain the same sort of matter and pus-infiltrated cellular sloughs. The small intestines were quite healthy.

Case XXIX.

Dysentery, uræmic, with irregular ulcers of the large intestine, indurated spleen, fatty liver and kidneys, the left kidney having two superficial urinary cysts, and adhesions of the right lung.

Ramdhon, a Hindu Cooley, aged 26 years, was admitted into the Hospital on the 3rd March 1864, with a month's dysentery and 16 days' anasarca, stating that since this last came on, the other affection had disappeared. He had been in the habit of drinking alcoholic liquors for years.

On the 5th he had had fever and one stool; his urine contained much albumen and had a specific gravity of 1014. He continued to have returns of fever, and rather constipated bowels till the 9th. Then he had no fever again till the 12th, and his urine and dropsy remained the same. After this he had some days fever, some days no fever, some days a stool, some days no stool, till the 24th, from which time the bowels became decidedly loose, and from the 27th the stools were passed in the bed clothes, and so continued till 8th May, when he died.

At the *post mortem* examination the large intestine was found studded with irregular ulcers of varying sizes, the largest as big as a rupee, situated in the sigmoid flexure penetrating through the mucous and muscular coats. The remaining were about 17, seated chiefly in the descending and transverse colon. No fluid in the peritonæum. The spleen was enlarged and indurated; liver fatty; kidneys double the natural size and fatty, the left one with two or three cysts on its outer surface filled with urine. The right lung had old pleuritic adhesions.

Case XXX.

Dysentery, malarious, with fever, enlargement of the spleen and cartilaginification of a portion of its capsule, enlargement and portal congestion of the liver, and enlargement and thickening of the gall bladder, which was adherent to the omentum and intestine.

Gonesh, a Hindu Durwan, aged 38 years, was admitted into the Hospital on the 19th May 1864, with fever and enlargement of the spleen and liver, from which he had

suffered three years and eight months. The liver was painful and extended 2 inches into the abdomen, and the spleen about 3 inches. He was very anæmie and had a red dry tongue, but his bowels at this time were said to be regular. He continued, however, to get two or three stools with the fever every day, until the 17th, when the number of stools in the 24 hours rose at onee to 20. After this he daily passed eight or ten stools, till he died on the 21st.

At the *post mortem* examination besides lesions of the intestines, the spleen was found very much enlarged, about 8 inches in length and 6 inehes in breadth, smooth on the surface, with two depressions on its inner aspect for the entrance of vessels, and a deep cut at its outer edge in one place and in another a smaller cut, dividing it partially into lobules. About half an inch from this edge, nearer the upper than the lower end, was a pateh thick and opaque in the centre with three or four congested vessels lying on it, and transparent at the circumferenee. On cutting through it the whole of it appeared to be of eartilaginous eonsistence.

The liver was very large; the gall bladder thick, filled with bile, and the lower surface of its fundus adherent to the omentum and coils of intestine by old eellular membrane; the surface of the liver was mottled, livid and yellow; and the seetion of its substance presented the same appearanee. The bile was of a dirty brownish eolour and fluid.

Case XXXI.

Dysentery, malarious, with ulcers of the mucous membrane of the large intestine, and enlargement and induration of the spleen.

Mudhoo, a Hindu laborer, aged 25 years, was admitted into the Hospital, on the 27th December 1864, in a very low state, with a three months' dysentery and fever, passing daily with griping and straining 10 or 12 stools mixed with blood. His spleen was so large that it occupied almost the whole of the left half of the abdomen.

On the 29*th* he had had 15 or 16 stools.

On the 30*th* he had had several stools, liquid and grumous, with a sediment whieh eonsisted of a few flakes of

gelatinous mucus only, but no slough or blood-clots. In the afternoon he died.

At the *post mortem* examination the large intestine was found throughout full of ulcers of varying sizes. The spleen was greatly enlarged and hard.

Case XXXII.

Dysentery, chronic, with thickening and patches of congestion of the mucous membrane of the large intestine, and portal congestion of the liver.

Koylash, a Hindu laborer, aged 23 years, was admitted into the Hospital on the 2nd February 1865, in a very low state, with a three months' dysentery and fever, passing daily seven or eight scanty stools, slightly tinged with blood, and one month's œdema of the legs and feet.

On the 3rd he had had six stools of the same kind, but no fever.

On the 5th he had had three stools, and a bad cough in the night previous. This way he continued getting two or three motions a day till the 12th, when he became delirious after the morning visit.

On the 15th the delirium still continued; he had had 10 stools and felt very weak; his eyes were jaundiced; liver projecting into the abdomen; speech incoherent; lips covered with sordes.

He was worse on the 16th, and died on the 17th a little after 9 P. M.

At the *post mortem* examination the mucous membrane of the large intestine was found thickened; in the cæcum, ascending colon, sigmoid flexure, and rectum it was covered with uniform patches of congestion. The liver was enormously enlarged and of a turmeric yellow colour from portal congestion. On section in the lobules within the turmeric yellow substance were found pinkish points. The gall bladder was of a grass green colour and distended with bile, which was ropy and about three ounces in amount; there was no gall-stone present in the bladder. And the lungs were both adherent but apparently healthy.

Case XXXIII.

Dysentery, with patches of congestion of the mucous membrane of the large intestine, and portal congestion and softening of the liver, old pleuritic adhesions of the lungs.

Surupea, a Hindu female, aged 50 years, was admitted into the Hospital, on the 19th April 1864, with one day's fever and one week's dysentery, passing four or five stools a day with griping. She continued to get an occasional fever after irregular intervals, and for some time two or three stools a day, but latterly six or seven, until the 30th May, when she died.

At the *post mortem* examination the lungs were found adherent to the parietes of the chest by old cellular membranes; but their substance was healthy. The right auricle of the heart was full of blood-clots; two or three small clots were also seen in the left ventricle; but the texture of the organ was quite healthy, and so also the arteries. The intestines were all free from ulceration, but there were congested patches in several places in the colon. A portion of the ilium which looked black, on being slit up, turned out to owe its colour to a coagulum of blood. The liver, though of usual size, was soft and yellow, its substance giving way before the finger thrust into it. The kidneys were natural and the spleen rather hard.

Case XXXIV.

Dysentery, Pleurisy, and Liver Abscess.

Bhoobun Mistree, a Hindu carpenter, aged twenty-eight years, was admitted into the Hospital, on the 21st January 1865, with a pain and bulging of the lower part of the right side of the chest. He had had malarious fever three months before, and a month after that dysentery, which continued for a whole month, subsiding only on the development of the pain in the right side of the chest, from which he was suffering when admitted. He had no cough or expectoration.

I noted the following physical signs on this day:—

Right side of the chest apparently larger than the left; vocal fremitus tolerably marked, but stronger on the left side. Percussion note of the right side throughout dull, lower half absolutely. No respiratory sound on this side except a little

in the upper part of the infra-clavicular region and behind close to the spine. Left side percussion note good, respiratory murmurs natural.

Mensuration.

	Left.	Right.
Inspiration	14½	16 inches.
Expiration	13½	16 ditto
Tranquil respiration ...	14	16 ditto

He lived for three days more, and died about 6 in the morning of the 25th.

At the *post mortem* examination three hours after death, weather sultry, cadaverie rigidity not having yet set in, on opening the chest the left lung was found closely adherent to the parietes by old cellular tissue; the right by scanty bands of recent lymph to the parietes and by pieces of soft lymph to the diaphragm; the whole surface of the right parietal pleura was opalescent from inflammatory exudation; no fluid effusion was visible while the lung lay undisturbed; but on pulling it out about 8 ounces of serum was found to occupy the cavity; lungs collapsed but otherwise healthy. The liver was found bulging upwards and apparently the seat of suppuration, for matter oozed out of it, on the slightest pressure, of a dirty grey colour. On further examination a large abscess as big as an infant's head was seen to occupy the upper surface of the right lobe of the liver, none other anywhere else. No notes have been preserved of the state of the intestines.

Case XXXV.

Dysentery, gangrenous, with infiltration and sloughing of the sub-mucous cellular tissue, sloughing of the overlying mucous coat, and granular exudative inflammation here and there; congestion and nodular follicular disease of the ilium.

Ruguber Geas, a Hindu, aged 30 years, was admitted into the Hospital, on the 1st June 1865, in a very low state, with a four days' dysentery, passing bloody stools and vomiting occasionally. He was very restless and cold, and complained of a pain in the abdomen.

On the 2nd he had had no more pain in the abdomen, but his pulse was sinking, and his stools, which were frequent and

scanty, contained several small shreddy and filamentous sloughs, but no blood-clots. He died the same night.

At the *post mortem* examination eight hours after death, weather hot and sultry, on laying open the large intestine its interior throughout appeared thickened, except the mucous coat; the cæcum contained a good quantity of dark-olive shreddy sloughs; after this at the commencement of the transverse colon there was a prominent fold with an ash-coloured slough on the surface. On section of this the sub-mucous cellular tissue was exposed, which looked white and greatly infiltrated with sero-pus, which it yielded on pressure. About an inch from this there was another thick fold; from the most prominent part of it the mucous membrane had been entirely removed, exposing the infiltrated dead cellular tissue. Next to it was another whence the mucous membrane was removed in two places exposing sub-mucous sloughs; after this the mucous membrane was quite healthy for about 2 inches; then succeeded a prominence of the size of a rupee with the central part of its mucous membrane irregularly sloughed, showing underneath it dead and infiltrated cellular tissue, which on pressure gave out more putrilage than higher up as before described; following this closely there was a mass of similar mucous and cellular sloughs in a space 2 inches square. Then succeeded another portion in the transverse colon, where the folds of the mucous membrane were smaller, slightly sloughed here and there, exposing cellular sloughs and covered, where not sloughed, with a granular exudation of a buffy colour. After this the whole of the transverse and descending colon, sigmoid flexure and rectum, appeared to be occupied by large button-shaped prominences, which in the first were covered with dark-olive-coloured sloughs exposing on section dead cellular tissue infiltrated with putrilage; at the angle of junction between the transverse and descending colon the folds of mucous membrane were of a violet colour, densely covered with masses of granular lymph or exudation; immediately below this there was a large rugged sloughy surface all round the inner surface of the tube, consisting of dead mucous and sub-mucous cellular tissues. In the sigmoid flexure sloughs and granular exudation were confusedly mixed up. In the rectum the folds were all sloughy and dark-olive, with here and there granular exudation. A longitudinal

section of these exposed the cellular tissue, which was dead, of a greyish colour and infiltrated with putrilage or sero-putrilage. In this portion of the gut the muscular coat, too, had an unhealthy appearance.

The mucous membrane of the ilium was congested; the congestion was partly ramiform, partly punctiform, and in one part uniform. Spread over its surface were little white prominences of the size of mustard seeds evidently from solid fibrinous deposit in the solitary glands. These little bodies were surrounded by congested vessels which seemed to form an areola and to converge towards them. In one place the congestion of the mucous membrane was very deep.

Case XXXVI.

Dysentery, chronic, with ecchymosis, congestion, transverse ulcers, and cicatrices of the mucous membrane, and an abscess in the liver.

Woodoy Chunder Bose, an unemployed Hindu, aged 43 years, was admitted into the Hospital, on the 1st January 1865, with an epigastric tumour, supposed to be from abscess of the liver. He confessed to have been ill for three months, first with fever, and then pain and swelling in the epigastrium, and lastly, for a fortnight, looseness of the bowels.

He was very low and emaciated, and the epigastric tumour seemed to be adherent to the parietes of the abdomen and fluctuating, so that the operation of paracentesis was proposed. But while preparing for this operation, the swelling went down a little and got hard with the occurrence of some gurgling in the transverse colon and an involuntary passage of stool. The paracentesis was therefore postponed. But he continued sinking day by day, and on the 6th was evidently dying. On now introducing an exploring needle, it did not seem to enter a free cavity, but rather a soft tissue, for with the inspiration and expiration the needle swung about as if it were in solid matter. Nothing escaped up the groove, but on pressure a little white substance was seen low down, which, being removed and placed under the microscope, presented some connective tissue and some indistinct cell structures, but no hepatic cells. The stools were passing involuntarily, but one was saved, of the colour of bad turmeric mashed and

mixed with water, very offensive, and yielding, when washed, some very small fæcal lumps and numerous pus-infiltrated cellular sloughs, which, on microscopic examination, turned out to be analogous to the white matter obtained by the exploring needle. He died at 11 A. M. on this day.

Post mortem examination 22 hours after death, weather hot and sultry.

The epigastric swelling had nearly gone down, there being now only a very slight prominence from the general level. On opening the abdomen a small quantity of serum was found in the peritonæum; the liver seemed to be somewhat enlarged, but apparently not much adherent after reflecting the parietes; on taking it out the left lobe proved to be larger than natural, being occupied by a large abscess on its posterior surface; the tissue of the anterior wall of this abscess, as well as the entire substance of the right lobe, was of a dark red colour, and contained no more collections of matter; on laying open the cavity of the abscess it was found to hold about a pint of a light yellow densely stringy matter which did not flow readily, but hung out like pus acted on by acetic acid, intermixed with visible cellular shreds; and its lining membrane was thick and tough, except inferiorly, where it was torn or rent and lay against the transverse colon. The stomach, which was pressed back, was so thick and deeply congested throughout, that it was at the first glance mistaken for a piece of the liver; its cavity contained a most offensive, thick, grumous fluid; no ulcers, however, were detected in its mucous coat. The mucous membrane of the lower portion of the large intestine was thickened, congested, and more or less ecchymosed, and lying on its surface were little pieces of pus-infiltrated cellular slough, easily picked out by the finger, without showing any loss of substance whatever underneath them; higher up there were two cicatrices, one at the hepatic flexure and the other in the transverse colon, occupying the entire circumference of the mucous layer of the tube. Between these points there was a double notch in the opposed cut-surfaces of the intestine, probably the remains of a perforation of the transverse colon, which was here ulcerated and adherent to the diaphragm and abdominal walls. In addition to this there were several black unhealthy-looking transverse ulcers as far as the cæcum, more or less deep, and

in some cases partially cicatrised. The mucous membrane of the small intestine was congested, and its Peyer's patches rather prominent. The mesenteric glands were greatly enlarged.

Case XXXVII.

Dysentery, uræmic, with sloughs in the stools, and ultimate recovery.

Sewpall, a Hindu laborer, aged 32 years, was admitted into the Hospital, on the 30th May 1865, with an eight days' choleraic diarrhœa, complaining of a severe burning sensation in the stomach, numerous watery stools, and scanty or no secretion of urine.

On the 31*st* the stools had diminished in number.

On the 1*st June* the stools had assumed a dysenteric aspect, being scanty and brownish, and yielding on washing a good deal of ropy and branny mucus with some streaks of blood. They were passed with much griping and straining.

On the 3*rd June* the dysentery still continued, and the stools possessed the same character, being purulent-looking and streaked with blood, and yielding under the microscope blood-globules, and epethelial corpuscles, but no pus-cells.

On the 4*th June* he voided a large piece of pus-infiltrated slough with his stools.

After this he continued to mend, and on the 12th June was sufficiently recovered to take his discharge from the Hospital.

Case XXXVIII.

Dysentery, scorbutic, with mental affection, and disordered nutrition.

Daniel Ward, an English seaman of the Ship *Counsel*, aged 46 years, was admitted into the Hospital on the 7th March 1865 with a two months' scurvy and dysentery. He was emaciated and weak, complained of pain in the legs, which were covered with ecchymosed patches, passed several stools in the 24 hours, and his gums and throat were swollen and tender, bleeding readily when touched.

From this state he was gradually brought round by the action of lime-juice, port wine, and mixed food, though his dysentery did not finally subside till the end of April. Since then his bowels have been rather confined than loose. From

the 26th April, however, he has had repeated attacks of maniacal delirium, and he presents now a miserable spectacle of confirmed dementia and shattered constitution.*

Case XXXIX.

Dysentery, chronic, with thickening, black pigment degeneration, and light granular, gradually passing low down into dark, tough, adherent, warty exudation on the mucous surface of the lower half of the colon and rectum.

Diljan, a Mahomedan butler, aged 25 years, was admitted on the 11th June 1865 with a 12 days' dysentery and sore-gums from the action of mercury he had employed to cure a syphilitic disease. He died on the 15th, having passed, during his short stay in the Hospital, with the stools a substance looking like dhall and rice mixed, some molecular sloughs, and a little gelatinous mucus; his sigmoid flexure felt lumpy and was tender, and abdomen tympanitic. At the *post mortem* examination the sigmoid flexure and rectum were thick, black, and lined internally by warty bodies, some light, some yielding on pressure a putrilage. The descending and transverse colon were in a similar state, but gradually less and less the further they were from the rectum; and the ascending, colon and cæcum were only black-stained, not otherwise changed.

Case XL.

Dysentery from gangrene affecting patches of the mucous coat, extending here and there to the cellular, and in the cæcum exposing the circular fibres of the inner muscular layer, with adjacent ecchymoses, ecchymosed sloughs, and abraded and perforating ulcers.

Golam Esdein, a Mahomedan farrier, aged 26 years, was admitted into the Hospital on the 13th May 1865 with a two months' dysentery and three days' fever. On the 27th May his pulse was 100, respiration 22, and he had passed an ecchymosed slough. On the 29th, a small blood-clot of the size of a pea. On the 30th, two or three small ecchymosed sloughs. On the 31st, three gumlows full of grumous and clotted blood.

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* Since this was written, he has died. At the *post mortem examination* the mucous membrane of the intestines and stomach was generally more or less congested and soft, and there were a few patches of ecchymoses in the colon, rectum, and stomach.

On 1st June, two gumlows of the same stuff. Afterwards the stools passed partly in the bed-clothes, partly in gumlows, also with grumous and clotted blood. On 5th June, two small mucous and one cellular sloughs. On the 8th, small blood-clots, a little gelatinous mucus, and minute epithelial sloughs. On the 10th, a blood-infiltrated slough. On the 11th, two carbonaceous cellular sloughs. On the 12th, numerous small shreddy sloughs. On the 13th, three large pieces of dark sloughs; the largest 4 inches long, ½ inch broad, and 2 lines thick, in one place with a fork 1 inch long; the two shorter, each 1½ inch long, one of which still retained its epithelium over a part; some smaller sloughs of the same kind, and, besides, minute ecchymosed mucous sloughs. The discharge of blood continued to the very last till he died on the 16th. At the *post mortem* examination, besides lesions of the large intestine already mentioned, the small intestine was deeply congested throughout more or less.

Case XLI.

Dysentery, chronic, with sub-mucous apoplexy and minute ulcers.

Sewgolam, a Hindoo Cooly, aged 20 years, was admitted into the Hospital on 25th May 1865, with a six months' dysentery, in a very low state. His feet were œdematous and skin colder than usual, and he was very thin.

On the 27th he had had five stools, which on washing gave four pieces of black cellular slough, one 1 inch long ½ inch broad, the rest smaller. The sigmoid flexture felt thick and rolling under the fingers.

On the 31st he had had four stools with some small pieces of shreddy slough.

On the 2nd June the stools contained one piece of gelatinous mucus.

On the 5th, small shreddy sloughs again in the stools.

In this way he continued passing sometimes more, sometimes fewer stools, until the 19th of June, when he died, after having been very loose for two or three days.

At the *post mortem* examination, the mucous membrane of the large intestine was found somewhat thickened through-

out and thrown into numerous fine close-set folds, most of which were covered by ecchymosed patches and ecchymosed ulcers. On cutting through the ecchymosed patches, the knife passed into blood-clots in the sub-mucous cellular tissue. The ulcers in the rectum and sigmoid flexure were minute, deep, sharply defined, and old standing. Some ecchymosed spots covering blood-clots were found also in the jejunum, none in the ilium.

Remarks.

Case first is an instance of irritative dysentery, of which, it is presumed, the presence of the tape-worm in the intestine was the cause, for as soon as that was expelled, the dysentery was cured.

In cases thirteenth and seventeenth round worms were met with, but how far they may have contributed to the production of the dysentery is unknown. The only fact clearly made out is, that the presence of worms in the intestines does sometimes cause dysenteric symptoms, and this I have often seen in children.

In the same manner irritant substances descending from the upper portions of the gut, such as acrid bile and putrid food, are also apt to give rise to dysentery. Nay, sometimes the very fæces, lodged for a while harmlessly in the large intestine, being converted into scybalæ, after a time gives rise to irritation and dysenteric action. Occasionally irritation from disease of a neighbouring organ, as the bladder in stone, or conveyed from a distant point through the medium of the nervous system, as in dentition, produces dysentery; and sometimes, again, discrasic conditions of the blood, as in gout, by metastasis, result in dysentery. The one characteristic feature of all these cases is, that the moment the irritation is removed, the dysentery is cured, unless the disease has already gone on to organic lesion.

The second is a pure case of congestive dysentery. It is not often that people die from this variety of dysentery, yet more or less congestion is found at most *post mortem* examinations along with other and more serious lesions of the large intestines. The varieties of dysenteric congestions I have met with are the following :—*Arboriform*, *Ramiform*, *Retiform*, *Punctiform*, *Maculiform*, and *Uniform*. The stools in

congestive dysentery are numerous and free, and danger to life arises more from exhaustion, produced by the enormous drain upon the system by the excessive evacuations than any thing else. Sometimes in these cases the over-distended capillaries burst, and blood is mingled with the mucus. Very often, being over-looked or neglected, they lead to inflammation, acute or chronic, and structural changes. In the instance under notice, the congestion was partly maculiform and partly uniform; in case sixth it was uniform; in case twelfth, maculiform and punctiform; in case thirteenth, maculiform and uniform; in cases twentieth and twenty-sixth, uniform; in case twenty-third, ramiform and arboriform; in cases twenty-fourth and twenty-fifth, retiform; and in cases thirty-second and thirty-third, maculiform.

Cases third, fourth, and fifth are examples of exudative dysentery. I have met with only two forms of exudation on the surface of the mucous membrane in dysentery, i. e., pellicular and granular. Case third is an example of pellicular exudation on the mucous surface of the intestine; cases fourth and fifth of granular.

The sixth is a case of carbuncular dysentery, in which the sub-mucous cellular tissue is the primary seat of disease. It swells up in isolated spots from inflammatory engorgement, rapidly dies, becomes infiltrated with pus, disintegrates in depôts, and is ultimately discharged by destruction of the mucous membrane in front. The mucous membrane at first is not at all affected; and it is only towards the end that it is involved.

The case under notice beautifully illustrates all the different stages of this disease, viz., first, engorgement of the cellular tissue, secondly its death, thirdly, its infiltration with pus, fourthly, the formation of depôts, fifthly, the destruction of the overlying mucous membrane, and sixthly, the sloughing and excavation. In all this, it will be observed, it coincides with carbuncle of the outer surface of the body. The sloughs in this affection are of two kinds. The depôt pressing from behind for liberation attenuates the mucous membrane, which at last perishes and gives rise to thin grey, or dark-olive sloughs. The sub-mucous cellular tissue, killed by the violence of the inflammation, forms shaggy or filamentous sloughs. These two varieties are quite distinct and unconnected, so that, while the mucous membrane slough looks not unlike the

gangrenous form, the pure cellular tissue slough is characteristic of the carbuncular inflammation. Case twenty-eighth is another instance of sub-mucous cellulitis, but not of the carbuncular form, being, as it will appear, of the diffusive type.

Case seventh is an instance of acute phlegmonous dysentery, showing well its two opposite extremes of congestion and sloughing. It is an adhesive inflammation. Its violence is not always confined to the mucous coat; it may extend to the cellular, muscular, and serous. Nor is it limited to the large intestine alone; in minor degrees it may spread to the small intestines and stomach, as was remarked in the case under consideration. The sloughs in this case are different from the sloughs already described and those which will follow. In the case on which I am writing, these were not observed in the stools during life, for they had not become detached. At first the stools, being washed, gave only red gelatinous mucus, and this doubtless proceeded from the mucous glands of the congested portions; for gelatinous mucus, colourless or red-stained, is merely the hyper-secretion of these excited glands. Afterwards this was mixed with blood-clots and fæcal lumps, which had a double significance; the fæcal lumps were permitted to pass by the cessation of spasm owing to tissue-death, and the bleeding took place in consequence of the commencing detachment of the sloughs, although none had yet appeared in the stools. A further corroboration of this opinion is found in the increasing fœtor of the stools, and the dulness, hardness, and tenderness in the cæcal and epigastric regions, for, though the bowel itself was in these localities dead, the surrounding structures had taken alarm at its presence. These facts perfectly tally with what was discovered at the *post mortem* inspection. Though the greater part of the colon and the cæcum were one mass of slough, and though sloughs were partially hanging loose in the rectum, there was no complete separation in any case, and there was sufficient congestion to account for the passage of the gelatinous mucus with the stools to the very last. All the sloughs in this case were ash-coloured, non-infiltrated, thicker than those of the carbuncular or gangrenous forms, but thinner than those of the erysipelatous, which, besides, are pus-infiltrated.

Case eighth is an instance of erysipelatous dysentery, in which the mucous membrane of the large intestine is also the seat of acute disease, except that its structure becomes here loosened and swollen, first, by a sero-inflammatory, and, lastly, purulent infiltration. Suppuration takes place in this interstitial effusion, and, so, the sloughs produced are thick and infiltrated with pus which oozes out of them on the slightest pressure. In this as well as in the last case the sloughs may separate in plates, more or less considerable, of the transverse folds, or they may consist of tubular pieces several inches long. Very often the patient dies in either of these affections, but sometimes he recovers with the loss of a large part of the mucous coat, the denuded portions undergoing then cicatrisation. In case seventh (acute phlegmonous dysentery) the victim was a native; in case eighth he was a European. In the former there was no evidence of any diserasie condition of the blood; in the latter, the blood was known to be bad, for he had had patches of a red papular eruption of the skin on the 4th night, which disappeared during the succeeding day, and, following this, congestion of the liver and jaundice, which had vanished by the 23rd, or three days afterwards. On the 29th he had had a large hæmorrhage from the bowel, which evidently proceeded from commencing separation of sloughs; and on the 1st September he had actually voided two large pieces of pus-infiltrated sloughs, the number of which afterwards increased from day to day until, on the last day he was alive, he had passed a tubular slough 4 inches long and 2 inches broad.

Cases ninth, tenth, and eleventh are examples of gangrenous dysentery. In the ninth and eleventh the gangrene was in the mucous membrane. In the former there was nothing to be seen throughout besides some unhealthy-looking denudations and a great mass of undetached thin carbonaceous sloughs extending all round the calibre of the tube and leaving no intervening healthy spots. In the latter the gangrene confined itself to the prominent folds, the intervening mucous membrane being pale and unaffected, except in the cæcum, where the gangrene not only invaded the whole of the mucous tissue, but also extended to the sub-mucous cellular coat which appeared white and infiltrated with serum where it had been laid bare by denudations of the mucous coat. In

this case, too, the sloughs were thin and black, and there had been a large passage of flaky sloughs and considerable hæmorrhage during life. In cases twenty-eighth and thirty-fifth we shall find again gangrene of the sub-mucous cellular coat and then of the mucous coat in front. In case tenth the gangrene attacked the whole thickness of the intestine, which from the cæcum to the sigmoid flexure was almost literally dissolved, giving way in many places in the very act of removing. In the rectum, however, only the mucous coat was affected, not with gangrene, but with follicular disease, it being studded with numerous small ulcers evidently beginning in the solitary follicles, for many of these were pale or white, prominent and solid. The outer surface of the colon was thickly covered with recent lymph, which also extended between the coils of the small intestine. This patient lost a great deal of blood during his short stay in the Hospital, but no sloughs till the last day he was alive, when he discharged a large ragged, and two or three smaller pieces of carbonaceous sloughs of the same kind as were found in the bowel after death. The patient in this case was an English Sailor, while in cases ninth and tenth the men were both natives.

Case twelfth is one of chronic phlegmonous dysentery with textural changes, such as thickening, softening, congestion, ecchymosis, and abrasions or minute ulcers free or under blood-clots, exposed or concealed by ecchymosed epithelial tissue, of the mucous membrane. This is a very remarkable case, for here we have not only the congestion, thickening, softening, and minute ulcers of the mucous coat, such as we usually expect in chronic dysentery, but also the true explanation of some of those minute ulcers which has not been hitherto properly understood. Here we had intestinal apoplectic clots under ecchymosed epithelium; the latter was wanting in some places leaving the blood-clots free; but, whether the blood-clots were free or covered, the surface underneath those blood-clots was found invariably more or less ulcerated. From this to the free minute ulcers which studded the membrane in this case the step was quite clear. And I will take this opportunity to state the fact, though it did not strike me in this particular instance, that since then I have frequently observed similar minute blood-clots and

ecchymosed sloughs in the stools during life in chronic cases of dysentery.

Case thirteenth is another example of phlegmonous dysentery with textural changes. In this instance there was congestion, thickening, ecchymoses, and minute ulcers of the mucous membrane, and round worms in the intestines. This is another remarkable case. Here there were no blood-clots under the ecchymosed tissue, but the ecchymosis seemed to be an infiltration of the entire thickness of the mucous membrane, forming in fact patches of maculiform congestion. In the centre of these patches there were little ulcerated spots which had evidently been produced by absorption. These ecchymosed patches, of the size of half-rupees, in a highly congested mucous membrane, were very likely seats of absorption and ulceration. In this case the mucous membrane of the small intestine was also similarly congested and its Peyer's patches inflamed, and that of the stomach thickened. This case shows the occurrence of ulcerative absorption in the centre of an intensely inflamed patch, and therefore another mode of origin of minute intestinal ulcers.

Case fourteenth is an instance of chronic phlegmonous dysentery with textural changes characterized by thickening and minute ulcers of the mucous membrane, cirrhosis of the liver and spleen, and ascites. In this case no clue was afforded as to the mode of origin of the minute ulcers.

Case fifteenth is an example of dysentery with thickening, transverse ulcers, and denudations of the mucous coat. This was probably a case of acute phlegmonous inflammation, in which the sloughs had been discharged and the minor inflammatory phenomena were subsiding. If he had lived sufficiently long, it is not at all unlikely that the ulcers would have cicatrised, and the thickened and hyperæmic state of the mucous membrane would have passed away. The transverse ulcers were no doubt due to sloughing of folds of the mucous membrane, and the denudations to the separation of still larger or tubular sloughs.

Case sixteenth is one of dysentery with rodent circular ulcers, ecchymosis, and thickening of the mucous coat. This was an acute case, for the patient, an English Sailor, died in less than eleven days from the commencement of the illness. The ulcers were very numerous, and varied in size from that

of an eight-anna to a four-anna piece. At the same time the mucous membrane was thickened and ecchymosed, but free from sloughs. I think in this case the ulcers had most probably originated in abrasions of the mucous surface in the centre of ecchymosed patches, as in case thirteenth, and then assumed a phagedænic action, by which they had rapidly spread, passing from the smaller to the larger ulcers; or they may have formed under blood-clots; or from sloughing of discoid pieces of the mucous coat as I have seen in case No. 734 of 1865 now in the Hospital, specimens of which have been kept in the Museum. The assertion of their origin in sub-mucous cellular abscesses or sloughs was clearly untenable, for in that case they would have been more irregularly and densely distributed, nor could they have originated in acute, simple phlegmonous or erysipelatous inflammation. In all such the traces of the violent action would not have been so completely removed in so short a time as ten days.

Case seventeenth is an instance of chronic phlegmonous dysentery, in a constitution shattered by mercury, with circular ulcers, perforation of the colon, jejunum and duodenum, matting of the omentum and mesentery, and round worms. Several of the ulcers had become completely cicatrised and contracted, while there were others still angry-looking with inflamed edges and evidently still going on with the work of destruction. One of these ulcers in the transverse colon had eaten its way right through all the coats and then passed through the jejunum into the duodenum, both of which had become agglutinated to the colon by effused lymph. Here it is easy to understand how the ulcerative action traversed the colon and one side of the jejunum; not so the opposite side of the jejunum and the duodenum. The only way in which it could be explained would be to suppose that the ulcerative action had spread through the whole calibre of a section of those tubes, as was the case, and then caused perforation of the opposite side whereby it had gained access to the duodenum, the distal side of which it had also reached in a similar manner at the rent through which the worm projected. The difficulty still remains to answer, why the perforations should have taken place at points of the walls of these hollow cylinders exactly opposite to one another in the case of each tube? What enabled the ulcer

to jump across the channel and pierce in a straight line the opposite wall? What was its guide? I think without much stretch of imagination we can detect this guide in the worms, which by their wriggling action had no doubt thrust their sharp ends through these walls in a straight line one after another.

Case eighteenth is an instance of chronic dysentery with nodular or lenticular follicular desease, small black ulcers and cicatrices of the mucous coat of the large intestine, abscesses in the liver which had discharged and cicatrised, and an abscess in the pelvis and substance of the right kidney. There are two classes of lesions of the solitary glands connected with dysentery I have met with: First, solidiform or nodular, in which the little glands become filled with a fibrinous material converting them into solid bodies which are then thrown out by sloughing of the mucous coat over them and absorption around, leaving behind small ulcers; and secondly, vesicular or cystiform, in which these glands are occupied by a transparent serum, making them appear like cysts which burst and discharge their contents and then acquire ulcerative action. The present case and cases tenth and twenty-third are illustrations of the former; and cases fifth and twenty-fifth those of the latter class. In both cases the little ulcers either remain single, or two or more of them become confluent. When single they are at first very small, being not bigger than a common pea, and many of them never grow larger; but there are others which rapidly increase to the size of large circular ulcers by the assumption of a phagedænic action. The confluent ulcers are large or small according to the number of single ones which coalesce to form them, but their outline is always more or less irregular, as observed in cases fifth, twenty-fifth, and twenty-eighth.

It is, moreover, interesting to notice in case eighteenth that abscesses in the liver, which during life had been known to empty themselves through the diaphragm and the lungs, had become completely cicatrised; that evidences of inflammatory action in the liver were still present in its numerous adhesions and the induration and flattening out of the substance of its left lobe. The pelvis and substance of the right kidney were the seat of an existing abscess, a complication of dysentery I had observed before.

Case nineteenth is an instance of chronic dysentery with circular ulcers of the mucous coat of the large intestine, and abdominal cellulitis ending in abscess. In this case the abscess was the thing which attracted chief notice during the patient's stay in the Hospital. It was opened and a quantity of thick matter discharged, affording some temporary relief. Nevertheless, at last he died, when the abscess was found to lie between coils of the intestine which were confusedly matted together and in front of the iliac bone, communicating only by a recently formed aperture with the interior of the colon. The ulcers in the large intestine could not be properly examined on account of the intricate adhesions, though they were made out to be circular. Abdominal cellulitis is not a common result of dysentery, and so I think this case makes an interesting record.

Case twentieth shows the association of chronic dysentery with bronchitis, and œdema and congestion of the lungs.

Case twenty-first shows the association of dysentery with pneumonia. There were here minute ulcers of the mucous coat of the large intestine which began in the solitary follicles.

Case twenty-second is an instance of the association of mammillated ulcers of the mucous membrane in dysentery with tubercular disease of the lungs. In case third, simple mammillation of the mucous membrane existed in combination with inflammation and pellicular exudation in other portions of the gut. In the present case there were mammillated ulcers of both large and small sizes, in the small as well as the large intestine. These two cases show, I think, only two different stages of the same affection. I do not therefore believe that mammillated ulcers arise from ulcerative absorption around deposited tubercles. On the contrary, I presume that the thin atrophied portions between the mammillary prominences represent really the earlier stages of this kind of ulceration. Mammillary ulcers are in fact indolent ulcers of the mucous membrane produced by the conjunction of many approximated points of atrophic loss of substance ending in ulcers. I cannot say what the tubercular diathesis has to do with them; it had certainly no influence in the third case, for it did not exist in it.

In case twenty-third, dysentery, with thickening, congestion, corroding ulcers, cicatrices, and stricture of the colon, is found associated with tubercular disease, congestion, and gangrene of the lungs. What relations these different affections may bear to each other is not known. However, the congestion and tubercular deposit in the Peyer's patches of the small intestine render it highly probable that the dysentery in this instance was a secondary effect of the tubercular constitution, and that the gangrene of the lung depended on the same cause rather than on dysentery, though this may no doubt have favored its occurrence by lowering the system in its vital powers. The general texture of the mucous coat of the large intestine appeared to be fatty, being of a buffy colour, considerably thickened and velvetty.

Case twenty-fourth presents an example, though, I confess, not a very satisfactory one, of uræmic dysentery following cholera. A better instance there is now in the Hospital, but he is likely to recover, and therefore most unlikely to give us an opportunity of pathological examination.* The mucous membrane in case twenty-fourth was injected in a retiform manner.

Case twenty-fifth is an instance of chronic dysentery with atrophy and ramiform injection in some portions, and thickening, softening, irregular, and transverse ulcers, and follicular cysts in other portions, of the mucous coat of the large intestine. It beautifully exhibits the delicate changes by which cysts of the solitary follicles transit, as stated under case eighteenth, into minute, irregular, and transverse ulcers. This is, therefore, a second mode of production of transverse ulcers quite separate from sloughing of the transverse folds noticed in other cases. Another point which it also well illustrates is atrophy of the mucous coat, a structural change observed only in chronic cases.

Case twenty-sixth presents chronic dysentery with a single elevated ulcer of an oval form situated on one side of a tumulus which showed it to be full of tubercular matter, and uniform congestion of the mucous membrane of the large intestine. While one-half of this tumulus was hard and cartilaginous, representing grey tubercle, the other half was occupied by a material like wet chalk or cream burrowing under

* This refers to case 37th, who has been discharged since this was written.

the mucous membrane and discharging itself through the ulcerated opening, representing thus softened tubercle in the act of being thrown off. It is hence a most unequivocal example of tubercular dysentery in which the deposit took place in the sub-mucous coat in a single considerable mass instead of in the minute solitary glands.

Case twenty-seventh is an instance of chronic tubercular dysentery, with ulcers and cicatrices in the large intestines, ulcers in the Peyer's patches of the small intestines, and tubercular deposits in the mesenteric and inguinal glands and both lungs, and simple congestion of the liver. It differs from the last case in the fact that it presented tubercular disease in numerous places instead of one only, and in other parts of the intestine and in other organs besides the large gut. In the large intestine the ulcers were much smaller than in the ilium, a circumstance which perfectly accords with their supposed origin in tubercular deposits in the solitary glands in the former and in the Peyer's patches in the latter. Besides the ulcers, there were many cicatrices of the same size present in the large gut to prove, if further proof were required, that as soon as the irritating tubercular substance was cast off, there was no indisposition in the ulcers themselves to heal.

Case twenty-eighth is an instance of dysentery with diffuse sub-mucous cellulitis, suppuration, and sloughing, and gangrene and sloughing of the mucous coat in front. This patient passed during life mucous and cellular sloughs from which the lesions found after death were fully anticipated. This case is entirely different from case sixth, for while the cellular affection in the latter occurred in patches of the carbuncular form, in the former it was diffuse and continuous throughout. In the cæcum the sub-mucous cellular tissue seemed rather gangrenous than inflamed in the present instance. This was not so, however, in case sixth.

Case twenty-ninth presents uræmic dysentery from chronic albuminurea with irregular ulcers of the large intestine, indurated and enlarged spleen, fatty liver, fatty and enlarged kidneys, the left kidney having two superficial urinary cysts, and adhesions of the right lung. It is more remarkable for its fatal complications than any peculiarity of the dysentery itself. Passing albumen with his urine and being anasarcous, little hope was

entertained of snatching him from his fate quite irrespective of dysentery, and the renal and hepatic lesions discovered after death further showed how fruitless it would have proved merely to cure his dysentery. Besides, he was subject to chronic intermittent fever with an indurated and enlarged spleen, which alone would have sufficed to have hurried him to his grave.

Case thirtieth is one of malarious dysentery with fever, enlargement of the spleen, and cartilaginification of a portion of its capsule, portal congestion of the liver, and enlargement and thickening of the gall-bladder, which was adherent to the omentum and intestine. In this case there was no doubt of the malarious origin of the dysentery, for he had all the lesions which usually attend malarious fever, from which he had suffered during life. Besides, there was evidence of liver disease and past cystitis (of the gall-bladder).

Case thirty-first is another instance of the same kind. Here there was a very large spleen along with chronic fever, and the patient passed blood during life. After death the diagnosis was verified by the large intestine being found throughout full of ulcers of varying sizes, and the spleen greatly enlarged and hard.

Case thirty-second had chronic dysentery, with thickening and patches of congestion of the mucous membrane of the large intestine, and portal congestion of the liver. This patient became delirious six days before his death; immediately after the delirium he had jaundice, and then rapidly grew worse and died. Here death may probably have been due partly to cholæmia acting upon a constitution broken down by chronic dysentery, although the intestinal lesions revealed at the *post mortem* examination only thickening and congestion of the mucous membrane.

Case thirty-third shows again the association of dysentery, with patches of congestion of the mucous membrane of the large intestine, with portal congestion and softening of the liver, and old pleuritic adhesions. These two cases raise a suspicion whether the congestion found in the intestine may not have been secondary to the portal congestion of the liver. Such a thing is not improbable, for I have known many cases of dysentery after a debauch in which the intestinal affection

was clearly traceable to the congestion of the liver brought on by the large quantities of alcohol swallowed, and which generally get well by keeping quiet and avoiding the stimulant for a time. In these cases the dysentery is due to stasis of the blood in the liver, causing stasis of it also in the intestine. Hence these cases generally get well so easily in their earlier attacks. But when they have frequently recurred, these attacks must act injuriously on the intestine as well as the liver by keeping both more or less congested, as the blood from the intestines has to pass through the portal system, and there is a retrograde effect when that system is any way affected, giving rise, sometimes, to profuse hæmorrhage.

Case thirty-fourth shows the occurrence of an abscess in the liver succeeding dysentery, which, pushing upwards, caused inflammation, first, of the diaphragm, then of the pleura. The abscess was found large, and lymph was lying on the pleural surfaces, and a good quantity of fluid lay in the right side of the chest.

Case thirty-fifth is an instance of gangrenous dysentery with infiltration and sloughing of the sub-mucous cellular tissue, sloughing of the overlying mucous coat, and granular exudative inflammation here and there; congestion and nodular follicular disease of the ilium. This patient was admitted in a state of collapse so bad that the admitting officer actually mistook his case for one of cholera. When I saw him the following day and examined the stools, I found several small shreddy and filamentous sloughs, from which I was able to predict the presence of gangrene of the sub-mucous cellular coat. This diagnosis was verified by the *post mortem* inspection. The cellular tissue was in a gangrenous state, but the mucous overlying it was also dead in most places to give exit to the cellular sloughs. Besides these, there was granular exudation and nodular follicular affection of the ilium.

Case thirty-sixth is an instance of chronic dysentery, with ecchymosis, congestion, transverse ulcers, and cicatrices of the mucous membrane of the large intestine, and an abscess in the liver. The history of this case, before the man entered the Hospital, was not so satisfactory as I could have wished it. His own account would make it appear that he had first fever, then the epigastric tumour, and only for the fortnight

preceding his admission dysenteric symptoms. These facts are hardly compatible with the morbid phenomena revealed by the inspection after death. It was quite plain, from the character of the ulcers and cicatrices, that the intestinal lesions must have existed much longer than a fortnight; but it was not equally easy to tell whether they had preceded the abscess, as the abscess, too, was evidently chronic, its walls being lined by a thick organised membrane, and contents semi-solid.

It was so far more satisfactory than Cases eighteenth and thirty-fourth that both the intestinal lesions and the abscess in the liver were well marked and thoroughly made out. Here, too, the similarity of the pus-infiltrated sloughs of connective tissue in the stools during life, and lying on the intestinal surface after death, and the substance obtained by the exploring needle, coupled with the notched condition of the opposed cut-surfaces of the transverse colon which was here ulcerated and adherent, the rent in the lower part of the posterior wall of the abscess, and the phenomena of gurgling in the intestines and the seeming loss of fluctuation in the tumour during the man's first examination, leave little doubt that the abscess had burst and partially discharged itself during life by the transverse colon.

The mesenteric glands in this case, as frequently happens, were simply enlarged.

Case thirty-seventh, like Case twenty-fourth, is an instance of dysentery proceeding from the uræmia of cholera. This man recovered, but the almost complete suppression of the urine for some days with the presence of uræmic symptoms relieved only by the advent of dysentery which was known by the passage of blood and ropy mucus first, and then, of a slough, in the stools, are facts sufficiently expressive without a *post mortem* examination. These two cases differ from Case twenty-ninth in the fact that in the latter the uræmia was due to chronic albuminuria or Bright's Disease of the kidneys, whereas in them it proceeded from acute suppression of urine as a result of cholera.

Case thirty-eighth illustrates dysentery due to a scorbutic condition of the blood. It got well from the use of lime-

juice and mixed food, as these cases usually do, though the man still continues a patient for other complaints.

Case thirty-ninth is an instance of chronic dysentery in a syphilitic constitution aggravated by the abuse of mercury. In this case there was black pigment degeneration and thickening of the intestinal coats, especially in the rectum and sigmoid flexure, and the surface of the mucous membrane covered with a warty lymph, scattered and light in the tranverse colon, darker and closer in the descending colon, but darkest and densest in the sigmoid flexure and rectum. These little warts were rather tough and attached by a pedicle to the mucous surface. The individual granules varied in size from a grain of mustard seed to a grain of *Moong dhall*, for which, indeed, they had been mistaken when discovered in the stools during life.

Case fortieth is another example of dysentery with gangrene of the mucous coat, in some places extending to the sub-mucous cellular and in the cæcum laying bare the circular fibres of the inner muscular layer. Besides these there were also ecchymoses, ecchymosed sloughs, and abraded and perforating ulcers. The ecchymosed sloughs were pieces of the mucous membrane which were killed and partially hanging out, leaving behind ulcers surrounded still by ecchymosed tissue. Of the perforating ulcers there were four which had evidently eaten their way through all the coats, it being impossible to tell whether the peritonæum was destroyed in the same manner or rent by violence. This man had passed mucous, cellular, and ecchymosed sloughs during life. During his short stay in the Hospital he passed many more sloughs indicative of gangrene of the mucous and sub-mucous coats, and a good deal of blood. After his death the *post mortem* examination revealed the same objects as were met with in other cases of the kind, the gangrene being confined to the prominent folds of the large intestine, leaving the intermediate spaces tolerably healthy. The small intestine was throughout more or less deeply congested.

Case forty-first is a very remarkable one. It shows chronic dysentery associated with apoplexy of the sub-mucous cellular coat. The mucous membrane was only somewhat thickened, and its folds, instead of being thick and far apart, were numerous, fine, and closely set; their surfaces, however, were the

seat of patches of ecchymoses, which, on being cut, presented apoplectic effusion of blood in the sub-mucous cellular tissue, which in such places was dead and formed into sloughs. Along with these patches there were also numerous small ulcers which appeared as if they had been formed by punching out portions of the mucous layer, for they all extended to the cellular coat, which in some cases was still occupied by effused blood and dead. The mucous membrane had evidently sloughed out in front of these apoplectic masses to give them exit, and the cellular tissue choked and killed by the pressure of the blood. This patient had passed during life ecchymosed, shreddy, cellular, and mucous membrane sloughs. It is the third form of apoplectic effusion in the intestine I have met with. In this instance it lay in the sub-mucous cellular tissue, and was found also in the jejunum. In case twelfth it was under the epithelium in front of the fibro-vascular layer of the mucous membrane. In cases thirteenth, sixteenth, and fortieth it infiltrated the whole texture of the mucous coat and was of the true ecchymotic form, without any clots whatever. In the two first cases ulceration took place by the sloughing out of blood-clots and the tissue in front of them; but in the third or last class of cases it was evidently caused by absorption in the centre of the ecchymosed patches, or simple sloughing of the dead ecchymosed parts.

The 41 cases related above have been taken out of the whole number of cases of dysentery I have had in my wards of the Medical College Hospital during the last fourteen months, of which the following Return will afford some useful information :—

Return of Cases of Dysentery in my Wards during the last fourteen months.

Admissions.	Deaths.	Discharges.	Mortality to admissions per 100.	Post Mortem examinations recorded.
280	91	189	32·5	38

Of the remaining 53 deaths, some bodies we were not allowed to examine by the relatives of the dead, who opposed a religious objection to such proceedings, and others were examined but their notes have been lost through some unaccountable remissness. I make this statement to guard against the mistake that I have only given selected cases. No such thing. I have stated every case of which I had a *post mortem* examination without any selection or picking. Consequently they may be fairly accepted as showing only what we should expect to find every day. I shall therefore request the 38 to be taken as the standard, and then calculating from that and the numbers I may submit in my summary, to obtain the percentage under each head, which I will not state myself, as the cases are too few for the purpose of satisfactory generalization. To recapitulate the facts I have discussed in the above pages, I beg now to offer the following summary, premising here merely that the numbers under each head are the numbers of the cases as related above in which they have been observed, unless otherwise stated.

DYSENTERY.

1.—*From irritation of the mucous tubular glands.*

1. Direct, case 1st.
2. Remote, seen elsewhere.
3. Metastatic, seen elsewhere.

2.—*From congestion of the mucous membrane.*

1. Arboriform, case 23rd.
2. Ramiform, cases 23rd, 35th.
3. Retiform, cases 24th, 25th.
4. Punctiform, cases 12th, 35th, 36th.
5. Maculiform, cases 12th, 13th, 16th, 40th, 41st.
6. Uniform, cases 2nd, 7th, 13th, 20th, 23rd, 26th, 32nd, 33rd.

3.—*From exudative inflammation of the mucous coat.*

1. Pellicular, cases 3rd, 17th.
2. Granular, cases 4th, 5th, 35th, 39th.

4.—*From Follicular inflammation of the mucous coat.*

1. Nodular, or lenticular or solidiform. } cases 10th, 18th, 23rd, 35th.
2. Vesicular or cystiform, cases 5th, 25th.

5.—*From Phlegmonous inflammation of the mucous coat.*

1. Acute, sloughing, case 7th.

2. Chronic or textural.
   - *a.*—Thickening, Cases 5th, 12th, 13th, 14th, 15th, 16th, 23rd, 25th, 32nd.
   - *b.*—Softening, cases 12th, 25th.
   - *c.*—Mammillation, case 3rd.
   - *d.*—Atrophy, case 25th.
   - *e.*—Fatty degeneration, case 23rd.
   - *f.*—Gelatinous degeneration, seen elsewhere.
   - *g.*—Fibrous degeneration, cases 9th, 17th, 18th, 23rd.
   - *h.*—Pigment degeneration, cases 18th, 39th.
   - *i.*—Amyloid degeneration, seen elsewhere.

6.—*From Erysipelatous inflammation of the mucous membrane.*

1. Great infiltration of the mucous coat and pus-infiltrated sloughs, case 8th.

7.—*From Gangrene.*

1. Of the mucous coat ... primary, cases 9th, 11th, and 40th. secondary, cases 18th, 35th.
2. Of the sub-mucous cellular coat ... primary, cases 18th, 35th. secondary, case 11th.
3. Of the whole thickness of the intestine, case 10th.

8.—*From sub-mucous cellulitis.*

1. Sub-mucous abscesses, case 6th.
2. Sub-mucous diffuse suppuration, case 28th.

9.—*From tubercular deposit.*

1. Massive, case 26th.
2. Scattered, case 27th.

10.—*From Intestinal Apoplexy.*

1. Ecchymotic, cases 13th, 16th, 40th.
2. Sub-epithelial, case 12th.
3. Sub-mucous, case 41st.

11.—*From disorders of the Blood.*

1. Uræmic ... Albuminuria, case 29th. Cholera, cases 24th, 37th.

2. Cholæmic, case 32nd.
3. Pyæmic, seen elsewhere.
4. Malarious, cases 30th, 31st.
5. Scorbutic, case 38th.
6. Syphilitic, cases 17th, 39th.

12.—*Varieties of sloughs in dysentery.*

1. Tubercular, cases 26th, 27th.
2. Nodular, cases 10th, 18th, 23rd, 35th, 36th.
3. Ecchymosed, cases 12th, 13th, 16th, 40th.
4. Compact grey { plain, case 7th. / tubular, seen elsewhere.
5. Thick pus-infiltrated { plain, case 8th. / tubular, case 8th.
6. Ragged, case 11th.
7. Dark-olive, cases 6th, 35th.
8. Thin black { plain, case 7th, 40th. / tubular, case 9th.
9. Shreddy, case 11th, 40th, 41st.
10. Molecular, putrilage, cases 9th, 10th, 11th, 28th, 35th.
11. Flaky, epithelial, cases 6th, 9th, 10th, 11th, 28th, 35th.
12. Shaggy, case 7th.
13. Filamentous or cellular, cases 28th, 35th, 36th.
14. Ring-shaped, seen elsewhere.
15. Discoid, seen elsewhere.

13.—*Varieties of ulcers in dysentery.*

1. Abraded ulcers, cases 12th, 13th, 40th.
2. Minute ulcers, cases 5th, 10th, 14th, 18th, 21st, 25th, 41st.
3. Irregular ulcers, cases 5th, 25th, 28th.
4. Mammillated ulcers, case 22nd.
5. Circular ulcers, cases 16th, 17th, 19th.
6. Transverse ulcers, cases 15th, 20th, 25th, 35th, 36th.
7. Rodent ulcers, cases 19th, 23rd, 26th.
8. Perforating ulcers, cases 17th, 36th, 40th.
9. Denuding ulcers, case 15th.
10. Tubercular ulcers, cases 26th, 27th.

14.—*Varieties of Hæmorrhage in Dysentery.*

1. Intestinal apoplexy, case 12th, 41st.
2. Intestinal ecchymosis, cases 12th, 13th, 16th, 40th, 41st.
3. Discharge of blood with stools.

1.—Red streaks.
2.—Linear clots.
3.—Massive clots.
4.—Fresh blood.
5.—Grumous blood.
6.—Infiltrated blood.

Red streaks are seen when the blood coagulates as it flows from the ruptured capillaries in the earlier stages of dysentery from the force of straining. Linear clots are formed under the same circumstances when the blood coagulates as it flows from minute vessels.

Massive clots when the blood is poured in large quantities higher than the rectum. Fresh blood when the bleeding proceeds in quantities from the lower part of the rectum.

Grumous blood when the blood remains fluid and is mixed with water in the upper parts of the intestine.

Infiltrated blood when the blood infiltrates pieces of slough during their detachment, or portions of the mucous tissue which afterwards slough as in the case of ecchymosis.

15.—*Complications of Dysentery.*

1. Intestinal worms, cases 1st, 13th, 17th.
2. Small intestines :—
   a.—Congestion, cases 7th, 13th, 18th, 20th, 23rd, 40th.
   b.—Inflammation, case 3rd.
   c.—Ulceration of Peyer's Patches, case 23rd.
   d.—Congestion of Peyer's Patches, case 20th.
   e.—Mammillated ulcers, case 22nd.
   f.—Tubercular deposit, case 23rd.
   g.—Perforation, case 17th.
   h.—Apoplexy, case 41st.
3. Peritonæum.
   a.—Dropsy, case 14th.
   b.—Peritonitis, case 10th.
   c.—Adhesions, cases 10th, 30th, 36th.
4. Connective tissue.
   a.—Abdominal cellulitis, case 19th.
   b.—Abdominal abscess, case 19th.

5. Diaphragm, inflammation, case 18th.
6. Omentum, inflammation, cases 17th, 30th.
7. Mesentery, inflammation and adhesion, case 17.

   Mesenteric glands, { tuberculous, case 27th. / simple enlargement, case 36th.

8. Supra renal capsule.

   Inflammation, seen elsewhere.
   Abscess, seen elsewhere.

9. Urinary bladder, inflammation, seen elsewhere.
10. Stomach.

    Congestion, cases 7th, 36th.
    Thickening, cases 13th, 36th.

11. Liver.

    a.—Simple congestion, case 27th.
    b.—Portal congestion, cases 30th, 32nd, 33rd.
    c.—Enlargement, cases 18th, 30th.
    d.—Capsulitis, case 18th.
    e.—Cirrhosis, cases 4th, 14th.
    f.—Fatty degeneration, cases 2nd, 18th, 29th.
    g.—Abscess, cases 18th, 34th, 36th.
    h.—Inflammation and adhesions of the gall-bladder, case 30th.

12. Spleen.

    a.—Capsulitis, cases 18th, 30th.
    b.—Atrophy, case 22nd.
    c.—Congestion, case 24th.
    d.—Enlargement, cases 18th, 24th, 29th, 30th, 31st.
    e.—Induration, cases 14th, 28th, 31st, 33rd.
    f.—Softening, case 30th.
    g.—Abscess, seen elsewhere.

13. Kidneys.

    a.—Enlargement, cases 18th, 24th.
    b.—Congestion, case 24th.
    c.—Nephritis, case 18th.
    d.—Pyelitis, case 18th.
    e.—Abscess, case 18th.
    f.—Fatty degeneration, case 29th.
    g.—Urinary cysts, case 29.

14. Lungs.

a.—Hydrothorax, case 5th.
b.—Pleurisy, cases 20th, 21st, 23rd, 29th, 33rd, 34th.
c.—Bronchitis, case 20th.
d.—Parenchymatous congestion, cases 5th, 20th, 23rd, 29th.
e.—Pneumonia, case 21st.
f.—Œdema, case 20th.
g.—Phthisis, cases 22nd, 23rd, 27th.
h.—Gangrene, case 23rd.

15. Anasarca, case 29th.

Diseases of the uterus, ovaries, and fallopian tubes I have sometimes seen, though not in these cases.

Most of the pathological conditions I have described in this paper are perfectly susceptible of diagnosis during life, and hence the value of an intimate acquaintance with them and their modes of investigation. Careful physical examination will supply in dysentery as certain information as it does in a case of pneumonia or Bright's disease. The modes of procedure here are two, *i. e.*, 1*st*, the examination of the abdomen, 2*ndly*, the examination of the stools.

Abdominal examination is made with the hand to ascertain the seat of any tenderness or thickening, the contents of the bowel, the tension of the abdominal muscles, and the state of the neighbouring solid organs. Tenderness and thickening of the intestine point to the seat of the inflammation, or, if considerable, to the situation of separating sloughs or colicky distension of the diseased structures; in the first case showing where leeches or blisters may be applied, in the second, where ice and cold may be applied in cases of hæmorrhage; and in the third the value of giving carminatives by the mouth. Thickness of the bowel with the loss of tenderness indicate extensive tissue-death and the importance of giving stimulants in place of antiphlogistics. Tenderness with muscular tension shows the advent of peritonitis. Dulness of the intestine under manipulation with the fingers and percussion shows the presence of sloughs, and not fæces if the inflammation has been acute. Gurgling with loss of sensibility, after acute symptoms, shows a dissolving condition of

the bowel. And tumours or enlargement of other organs, the presence of complications. This cursory notice will suffice to prove the necessity of carefully exploring the abdomen in dysentery as a means of diagnosis.

The examination of the stools is conducted according to the following method :—

Any paper, rag, or other foreign substance, that may have fallen into the stool-pan is first removed by a pair of tongs. Then the contents of the stool-pan, having been described in that state, are diluted with water, and the supernatant liquid gently poured out into another vessel. This process is repeated once or twice if the first operation is not successful in cleaning the sediment. The sediment is then itself poured out into a white china-plate or dish, when its naked eye composition is easily seen. Any sloughs, mucus, blood-clots, or fæcal lumps present become then perfectly visible, and may be further washed if desired by being taken up with the tongs and placed in clean water, and manipulated with a small iron-rod set in a wooden handle.*

The following are the objects which may be seen in the stools and their presumed pathological significance.

Sloughs and blood as already described.

Mucus.	Ropy. Gelatinous. Branny. Thready.
Lymph.	Shreddy. Granular.
Pus.	Laudable. Ichorous. Scrofulous.
Fæces.	Moulded. Scybalar. Soft. Frothy. Thin and liquid.

* For the introduction of this mode of investigation we are indebted to Dr. Edward Goodeve, Professor of Medicine in the Calcutta Medical College.

Putrilage, or invisible molecular sloughs.

Tubercular sloughs, if detected in the stools, would show the presence of tubercular dysentery. This I have never seen.

Nodular sloughs would shew the presence of nodular follicular disease, but these nodules are very apt to be confounded with minute pieces of pus-infiltrated mucous sloughs of Erysipelatous Dysentery.

Ecchymosed sloughs show the presence of abraded or minute ulcers, and intestinal apoplexy.

Compact grey or light yellow sloughs, plain or tubular, show the presence of acute Phlegmonous Dysentery.

Thick pus-infiltrated mucous sloughs show the presence of Erysipelatous Dysentery, a most dangerous disease.

Ragged sloughs proceed from either dead mucous membrane deprived of its epithelium, or sub-mucous cellular tissue. They show the presence of gangrene.

Dark-olive sloughs show the secondary gangrene of the mucous coat.

Thin black sloughs, plain or tubular, show the primary gangrene of the mucous coat.

Shreddy sloughs show the presence of gangrene in either the mucous or the cellular coat.

Molecular sloughs (or putrilage) show disintegration of tissue.

Flaky epithelial sloughs are the first indications of gangrene of the mucous membrane.

Shaggy sloughs are grey compact or thick sloughs with dead filamentous connective tissue hanging out from the attached surface of the mucous membrane, showing the violence of the inflammatory action.

Free filamentous or cellular sloughs, when simple, show the presence of primary gangrene in the sub-mucous connective tissue; when pus-infiltrated, that of sub-mucous cellulitis.

Ring-shaped sloughs show the presence of ring-shaped ulceration in the mucous folds.

Discoid sloughs show the presence of circular ulcers in ecchymosed patches.

The meaning of the different kinds of blood in the stools has already been pointed out.

Ropy mucus I have seen as yet in only two cases of uræmic Dysentery. Probably it shows the presence of considerable passive congestion around the tubular glands.

Gelatinous mucus, whether colourless or red-stained, is a sure sign of excited action in the tubular glands of the large intestine in the earlier stages of dysenteric inflammation.

Thready mucus consists of casts of the tubular glands when plastic exudation is largely mixed with the mucus proper and forms solid cylinders. This is found in a more advanced stage of inflammation, in fact, shortly before complete death of the part.

These two varieties are, therefore, signs of the progressive different stages of the advancing inflammation.

Branny mucus is supposed to consist of epithelial scales, infiltrated with plastic exudation, shed during the process of resolution after the disease had reached its acme short of death of the mucous membrane.

Shreddy lymph shows the presence of pellicular exudation, and granular lymph of that of granular exudation, on the inflamed mucous surface.

Pus, laudable, ichorus, or scrofulous, is sometimes secreted by intestinal ulcers, and may pass out alone or adhering to fæces. This would of course show the presence of ulcers.

The fæces is generally locked up in the upper parts of the bowel in acute cases of dysentery, but sometimes it passes and is of a frothy appearance and acid smell. Such fæces in these cases is often the cause of the dysentery, which gets well on its character being changed. If an acute attack of this disease run on to much tissue-death, the fæces begins to pass first as a thin liquid, and afterwards in lumps or scybalæ. But if resolution take place, then solid or soft fæces is discharged at once. In cases where ulcers have cicatrised, the contracted cicatrices constitute so many strictures which may flatten out consistent fæces into perfect ribbons.

All these facts serve to prove the absolute necessity of a careful study of dysentery, for with that study comes the proper appreciation of all the different varieties and the different

stages of those varieties, a knowledge of which cannot fail to be of great value in guiding our treatment of that dire malady. For instance, of what use is it to give ipecacuanha when the stools show that gangrene has set in, or that acute phlegmonous dysentery has already merged in extensive sloughing? Again, of what inestimable advantage is it not to know from a minute speck of blood during the separation of sloughs that a larger hæmorrhage is close at hand against which precautionary measures should be immediately adopted?

But without entering further into the subject of treatment about which many opinions prevail, I will bring this paper now at once to a conclusion.

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